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HUMAN RELATIONS ON THE INDIAN SCENE *

PARS RAM (*Ahmedabad*)

THE MALADY

The suspicion that one social group nurses about the motives and intentions of other groups related to it presents a challenge to the administrative acumen of those in charge of the management of men in the government, political parties, local bodies, offices and factories. More than that, it makes a call on the scientific ingenuity of the psychologists interested in action research on human relations.

A recent survey conducted on inter-group relations at Aligarh has spotted some knotty problems of social perception. Most people think government employees are autocratic and aggressive. As against this, most of the government officers complain that members of the public frequently are not amenable to discipline and often hinder, intimidate and sometimes humiliate gevernment officials. On the economic plane, trade unions accuse the present government of giving a free hand to the capitalists at the cost of what is due to the workers. Financiers on their part, are extremely nervous at the concessions which the workers are being given through recent legislative measures. As a businessman put it, "The Indian Republic is fast becoming a welfare state. We have been warned of this through so many Acts of legislation curtailing our liberty." Members of the "minority" groups suffer from the insecurity of being reduced to non-entities under the powerful and influential domination of the "majority." Those who are called the "majority" group in this country feel they hardly constitute even a numerical majority. The notion of the "majority community" according to them is a myth as the combined numerical strength of the Scheduled Caste groups, Muslims, Christians, Sikhs, Parsis and others exceeds the so called "Caste-Hindus." "Caste-Hindus at best," said one of them, "is just another minority group amidst so many others in India." Many Muslims, the survey showed,

* Presidential address, Section of Psychology and Educational Science, 39th Indian Science Congress, Calcutta, 1952.

were nervous at the "pervasive" trends in the present day "Hindu" government which they allege is out to destroy the Muslim culture and the Muslim influence in India. Many Hindus also express the same fear about the Hindus at the hands of the government. Several officers hesitate to call a Muslim to book lest they should be blamed for harassment of the minorities. In the Punjab, Sikhs feel that their identity as a religious group is threatened by the Hindus. The Punjabi Hindu particularly from the towns is, on the other hand, ever ready to leave for Delhi and other parts of India on account of the lively fear that the Sikhs would one day rule the Punjab. It will thus be seen that social groups do not have the same cognition of the same social group. The two perceptions of the same social group are contradictory and surely both of them cannot be true. The whole situation remains one of a mad-house where everyone blames the other for what the other is not and provides suitable material for a dramatist to write a play on the comedy—tragedy is probably the more apt description of error in social perception.

Within the same group, be it a political group, a village panchayat, an office, a co-operative society or a local body, the situation is non-too-happy. The life-history of these groups follows, with minor variations, the following cycle: *The First Stage*. Platitudes and fine resolutions dominate the first few meetings followed by election of office bearers which leaves a bitter taste in the mouth of those aspirants who are not recognised as the centre of the universe. Silent grouse and a whispering propaganda are set on foot against those put in the prestige status at the first meeting. *The Second Stage*. The group converts itself into cliques working at cross purposes. This friction reduces the capacity of the group for objective output of work. Points of order, legal hair-splitting, challenge of the rulings from the chair and "walk outs" dominate the proceedings of the meetings. Well-meaning members of the group with a developed civic sense feel disgusted and mentally wean themselves from their involvement in the group. After having a fling at the human society in general they retire from the scene. After the manner of Bharatari Hari they take refuge in meditation and mystic practices. This ostrich policy does not improve the situation within the group. *The Third Stage*. Vote of no-confidence in the executive; mass resignations, mudslinging on the rivals and urgent telegrams for the centre's intervention follow in quick succession. Some cliques have a merry time in this confusion till they are thrown out of gear by their rivals.

Such groups do not work for discovering their functional relation with other groups and the public at large. Activities of the group resemble the social life of apes and monkeys so graphically depicted by Zukermann—who are ever engaged in plotting against the most powerful amongst them and after he had been licked against the next powerful one.

The social climate obtaining in a group brings its own stress on its members resulting in shifts in intra-psychic balance—the dynamic relation of ego, the super-ego and the id. I noticed a difference between the personal problems of the students studying in a men's college and those enrolled in a co-educational college. The former brought problems of anxiety about certain somatic symptoms and struggle against masturbation and the latter's torture centred round the problems of character. This difference was due to the situation created by the incidence of co-education.

The classical symptoms of hysteria which engaged the attention of Charcot and other psychiatrists in the late XIX century were no longer in the centre of the clinical picture of hysteria after world war I. The choice of symptoms by a neurotic is influenced by the cultural climate of his environment. A government calling upon its citizens to be prepared for civil defence as well as for offence when there is no immediate use for this preparation leads to compulsive neurotic symptoms in the population.

Inter-group conflicts and conflicts between rival cliques within the same group severely strain the individual member's maintaining a good intra-psychic balance. Work in the office or factory for many peple becomes a super-ego symbol and an instrument to manage the id impulses. If the human relations amongst the hierarchy of bosses are smooth, hard work for the subordinates provides a good control over the unmanaged id. In case there is conflict amongst the bosses, the work situation for the subordinates carries the meaning of a severe or a weak super-ego. This situation can have one of the following consequences. Either (1) the unmanaged id is controlled through illness in which the physical symptoms of a psycho-somatic character dominate the scene as an alternative to the control of the id; or (2) a tendency to vagrancy, irresponsibility and impulsive quarrelsomeness dominate the work atmosphere. In situations like these employees and workers become less work-centred and more boss-centred. With work for the boss's party or his person becoming the dominant passion, the growth through work and adequate human relations comes to an end. Arrogance is then shown by favourites of the boss and jealousy reaction by

those in the opposite camp. Frequent transfer of the staff, complaints, counter-complaints and the manufacture of false evidence to support complaints consume a good part of the time of the staff in some offices because of the tense atmosphere.

It takes some time for anyone to get used to a particular kind of work. If there are frequent changes in the staff, the money spent on emyloyees in transit is sheer waste of funds and also of time. The figure on time and money, lost owing to interpersonal and intergroup friction, if it could be computed, would be staggering. The frequency with which unsatisfactory human relations make for somatic symptoms is amazing. Sore throat, constipation, paralysis and predisposition for many other physical diseases are magnified under stress of group relations. Alcoholism, sexual aberrations and anxiety are often the direct result of pin-pricks received in the employer-employee relation.

The fear of persecution, whether entertained by an employee from his employer or by a cultural group from another group, can no longer be treated as a mere safety valve to let off the pent-up steam or a harmless leisure-hour activity as a substitute for the expensive club-membership and other recreations and hobbies. This fear often results more from imaginary than from real situations. Yet the fear itself is a real experience and brings in its wake far-reaching social consequences. Many people, under stress of fear, change their jobs or migrate to other places. The evil consequences of migration visit both on the migrants and those who are left behind through dislocation of the trade in which both had acquired a functional harmony. The need of the hour is to work out a delicate integration of the unutilised capital, technical talent which is rotting and the raw material that goes waste to intensify the drive for production of useable goods. Public enthusiasm for the first Five Year Plan, observe the authors of the plan, is a necessary pre-requisite of any Plan. The energy lost in inter-group friction is tremendous and consequently the level of public enthusiasm for constructive projects continues to be below par.

Psycho-analysis are familiar with patients suffering from obsessional neuroses who work themselves up for a state of conviction and belief and then with the same zeal undo this conviction anxiety-ridden ultimately into the pathetic state of complete impotence. With many groups in the various fields of national life working at cross purposes we live in a social climate promoting illusions of the experience of intensive effort, doubt and confusion. This see-saw movement of their energy lands them at achievement only to discover that we are where we were.

To gear the whole social machinery so thet we may grow out of this neurotic merry-go-round and to help various groups achieve the social ends embodied in the Constitution of the Republic of India is a challenge and also an opportunity for the Indian social Scientists. The damage done to the health of a vast number of individuals by the inter-group conflict should make psychiatrists and psychologists alike examine their stock-in-trade and its potency in meeting the situation.

Some Indigenous remedies

Every society develops certain techniques of meeting a situation of stress whether the stress is from nature or from man. The silent and well-poised adjustment to the stress going on beneath the surface is generally not adequately appreciated. A review of the modes of adjustment to meet the stress of the inter-group conflict in Indian society is relevant here.

(1) *Use of Prestige.* The most widely used method of mitigating inter-group friction in India is to call men of prestige to the scene of conflict. Senior Government officers and leaders of public opinion in the confidence of the Government used to be the men of prestige during the British rule. Their place was gradually taken by those involved in the political struggle. A visit from national leaders to the scene of conflict is insisted on even now, whether the situation is that of strike, communal fight or grouse against bosses in business or the Government office. No less a person than the Prime Minister is sometimes asked to intervene in a purely local conflict. Usually leaders of all-India importance meet, for this purpose, the local luminaries. The latter's faith in their own importance is, thereby, reasserted and revitalised and they in return reassure their patronage to those below them in social prestige. This is followed by public speeches through which people are exhorted to be noble and united. Instances of goodwill and harmony are quoted from the past. Many in the audience are thereby moved to tears and the situation of conflict is thereby resolved or, to be more exact, shelved.

To use men of prestige to reduce inter-group tension works very well in villages where the horizontal and vertical mobility of the population has not disturbed the traditional elite-public relation. The same is not true of the cities where leaders of different persuasion have already acquired a crystallized following. A "saint" for one section of the population is often a man of questionable integrity for the rest. The leader who appears on the scene as a conciliator meets with a

hostile demonstration from the group which distrusts him. The use of social prestige for reducing tension postulates a dominant leader and a submissive public. The public is no longer docile as was the case in the past. The experience of the last thirty years in India has made for strong ambivalence towards leaders. The temporary peace brought about through deference to the leader is soon disrupted. Peace-makers run the risk of being discredited and even murdered. There are some leaders who seriously believe that through their making a public appearance and a speech they can put the world right. Similarly, many laymen believe that the leaders will transform the situation by their magic presence. This hypnotic relations between the leader and the followers promotes magic mentality in the social climate and undermines the role of rationality. This method of tackling the tension situation conserves the roles and status already current. Inter-group tension is essentially caused by the situation in which more people want to take to new roles and acquire new status. The use of prestige to mitigate tensions increases ambivalence and inhibits people's acquiring new roles. As such it increases tension and interferes with the people's way to be creative in suggesting new solutions to the problem. The logic of the situation coerces more people to be creative in relation to their natural and human surroundings. New talents to build a spirit of co-operation amongst men for exploiting natural resources in new ways are sorely needed to satisfy the basic needs of the people. The few leaders, however, well-meaning they may be in their intentions towards the public at large, play their very-well-poised role of making themselves active and dominant and thereby leaving the role of robots for the rest of the public. Every time there is a crisis "the-few-active-and-dominant" and "the rest-passive-and robot-like" situation is repeated and perpetuated.

(2) *The laissez-faire solution.* This approach to the resolving of the social conflict is based on the hope that the present circumstances are gradually taking a turn for the better. Those who advocate this way of resolving social conflicts dread taking an active measure to ease the tension situation. They believe that even a well-designed interference with the silent forces engaged in healing the injury may worsen the situation. This approach has been a marked feature of the British temperament. The laissez-faire approach suits very well a small country like the U. K.—cut off from the mainland of Europe, with one God, one Church, one language and one King to crown it all. It works very well in an era of slow

changes and in societies with stabilized roles and status. The present ruling elite as well as the masses in India are also grounded in the laissez-faire philosophy. The Indian society is facing a social fermentation of a vast magnitude at the moment. All the set conventions and the traditional ways of solving problems of inter-group relation are fast proving ineffective. A policy of drift or the least resistance may be very soothing but it is essentially the ostrich approach.

A recent study of inter-group relations revealed the tremendous damage that a policy of drift is doing to human relations in government and business administration. Most administrative heads, specially in small places, like to be guided by the written regulations. Many of the day-to-day problems of discipline can be solved easily through the conference method and through the officers maintaining a personal contact with men committed to their charge. This is avoided because it requires more intelligence, effort and time. The conventional method of demanding written explanation for minor lapses, quoting regulations in reply to the grouses and complaints of the staff continues to be in vogue. In fact many officers promote, in the name of efficiency, a spirit of impersonality in the establishments under their charge. This practice makes for charging the social atmosphere with suspicion. Many juniors who look for personal friendship relations with their colleagues feel frustrated and build phantasies of being rejected and persecuted. Frantic efforts are then made by various groups and cliques in the office to involve as many of their colleagues as possible in minor offences. Those who manufacture lies and can make these lies a force to reckon with dominate the scene. The same forces are at work in the country at large. It has been estimated that the number of those involved in court cases in India approaches one-fourth of the figure of Indian adult population. Litigation has been described as the national sport and pastime in India. The heavy demand that litigation makes on the poor people both in time and money should be obvious to anybody. Its social and psychological consequences often go unappraised. Litigation promotes malingering which is a near cousin of hysteria amongst those who avoid attendance at a court for fear of the court decision adversely affecting them. And once malingering has been acquired in one setting, it is practised in all spheres of one's activity. The slow pace at which the ministration of justice moves in this country encourages those involved in litigation to fabricate evidence. Figures about medical certificates of fictitious illness issued in every city

would be staggering. And all this is the result of allowing conventions to have their way. And the laissez-faire philosophy in the background makes this damage to the human staff bearable and even palatable.

(3) *The Political Solution.* A third approach to the improving of human relations struggling for expression is relying on a political revolution to do the trick. Many young visionaries cast their net wide on the nationalization of the means of production, the creation of a classless society etc. Their logic works this way. World forces coerce mankind to create a new system of equitable distribution in consonance with improved methods of production. The deterioration of human relations in humbler places is due to the lack of a clear vision of the new economic system. The demoralization of people is a symptom and not a disease entity. All energy, according to these visionaries, should be devoted to the changing of the system; attention to minor details is of no use. There is an obvious plausibility and there are obvious flaws in this approach. It is true that a new approach to human relations cannot be worked out without bringing important changes in policies. But the dichotomy between the political system and the people for whom a political system is created cannot be artificially maintained. No political system has an autonomous existence. It is men and women who create a system to satisfy their needs and work it. Most visionaries, however, invest their effort in creating a system to order, to fit the pattern of a political ideology and believe that people must be made to fit in the straight jacket of an "ism". A new political set-up by itself does not, however, necessarily improve the lot of men in a social system. Those who comforted themselves with the belief that all the problems of India would be solved through political emancipation, stand disillusioned to-day and are persuaded to believe that something more is also needed. In fact the public opinion survey recently conducted at Aligarh showed a general scepticism in the population about a large-scale political change improving their lot.

(4) *Moral revivalism.* A fourth approach to improving human relations stresses the importance of improving the quality of the human stuff. In his report on Public Administration to the Planning Commission, Mr. A. D. Gorwala mentions spiritual poverty and the lack of character as stumbling blocks in the way of good public administration as also in the way of the lay man's achieving a unity of purpose with the Government. Gandhiji had realized the importance of the people's acquiring a new perspective on their personal and social

problems through re-assertion of faith in God. The stress on Ram Dhun was his method to revitalize faith in God. Gandhiji's diagnosis was no doubt fundamentally correct ; the human race has experimented with it for centuries. The medieval saints used fasting, prayer and meditation as means to achieve a new valuation of life. Vinova Bhave has been recently experimenting with the technique of achieving mass conversion to persuade the rich to make a gift of the land to the landless tiller. There is, however, one serious flaw in such an approach to socio-economic problems. People persuaded by revivalism change their technique of dealing with other people without their understanding the social meaning of their action. A rational understanding of the meaning of 'giving' in charity is superseded by a religious ecstasy in which giving for its own sake becomes the motive. Now, religious ecstasy remains an uncertain factor, as it has not unoften been utilised for crusades and 'jehad'. Nor does it give an insight into the social and economic factors underlying social conflicts or by itself help in training people in new social skills which should enable them to manage the impact of technology on society. "Ram Dhun" has not led to the villagers investing the buried gold in productive pursuits. It has not promoted rural banks to help cottage industries ; it has not established schools, hospitals, parks, or supplied clean water or a minimum sanitary standard to villages which are suffering for want of them. The whole problem needs a scientific approach.

A PLEA FOR A SCIENTIFIC APPROACH TO SOCIAL ACTION

No disrespect is meant for moral and religious enthusiasm in making out a case for a scientific approach to the problems of inter-group tension. Everyone will wish well to those who promote moral integrity and spiritual poise in men. Let there be a 'new birth' and conversion experience amongst different sections of the public and let there be abundant love of truth and non-violence amongst the masses. But will all this by itself help people to acquire all the abilities necessary for group living? Inspite of plenty of religious and moral fervour in the world, human relations to-day remain in a sorry state. The world would have been a happy place to live in, had a fraction of this fervour been converted into action. After all, there has been no dearth of moral fervour in any period of the history.

The trouble starts when religious principles have to be lived in the modern world of complex social relations. The maxim "love

thy neighbour as thyself" was easy enough to practise in an isolated rural community. No one lives in isolation in our times. The world is interdependent. To-day bread and rice in an Indian meal may have been grown by the Chinese, Russian and American peasants. Tea produced in India's tea gardens finds its way to all countries of the world. My neighbours are the whole of the human race on this globe and the question is how to translate into practice my affection for all of them. Something more is needed than mere moral fervour. A knowledge of the situation in which moral principles are to be lived is needed as also the methods by which the moral principles are to be translated into action in a particular situation. It is here that scientific knowledge becomes necessary for living a moral life. Scientific knowledge is not an antithesis of moral and religious pursuits. The primary function of scientific knowledge is to supply ways and means through which the insight achieved by mankind through philosophy and religion can be realized. Many instances from Indian setting of popular enthusiasm for achieving results but ending in smoke come to notice. There was, for example, an unprecedented zeal for political emancipation amongst masses which was considered absolutely necessary for reconstructing the civic life of the country. In the absence of the necessary managerial skill to put the moral intentions to a good use and for the lack of sufficient knowledge of the social forces bringing about the present stalemate, this enthusiasm has not been effectively used. Most people now regard the present government as an all-powerful agency but alien to them and always giving them a rough deal. Some people regard themselves martyrs and persecuted. Many cynics believe that the stalemate is due to our national character. There is, however, very feeble effort to train people in the new skills necessary to bring a unity of purpose between the government and the people. The food situation in the country is another instance in point showing that mere zeal for saving food is not enough and has not effected any saving worth the name. People's menus continue to be the same as in the past. A systematic inquiry into the resistance to change in food habits is necessary and will certainly, result in suggesting devices for breaking this resistance. Scientific knowledge thus is a necessary instrument for making moral purposes a reality. We are passing through a period when large-scale changes in the established modes of exploiting natural resources are forcing corresponding changes in the habits of individuals and groups. There is a tremendous cultural lag in individuals, groups and communities in their adjustment to the

changing situations on the social horizon. To achieve variation in behaviour in response to the challenge of the situation has now become a mere biological necessity. The science of social engineering needs to be developed in the Indian setting to achieve this

There is a general tendency in India to promote study of natural sciences with a neglect of social sciences such as psychology, anthropology and sociology The progress of natural sciences, too, will be seriously handicapped, in my opinion, if the science of social engineering does not receive the necessary impetus. Historians of science tell us that many of the natural phenomena put to good use in our times, such as electricity and magnetism were known to our ancestors. The knowledge of electricity was used by the Romans to decorate their gardens with electric toys, but it was not used by them to reduce human drudgery as there was no social impetus of democracy then to manufacture useable goods with the help of electric power. It required the nineteenth century philosophy of "the greatest good of the greatest number" to give a new impetus to modern discoveries and inventions in natural sciences. In the absence of a reciprocal relation between natural sciences and their utilisation for human welfare, all wind may be taken out of the sails of the natural science research. We have reached a stage in India when there is plenty of accumulated knowledge and wisdom on food production, animal husbandry, medicine, engineering etc., but this knowledge and this wisdom have not become a live force. While the great scientists are busy teasing out the secrets of atomic energy, the masses are still enslaved to their daily toil with implements invented by their ancestors at the dawn of civilization. This contrast is bound to have serious consequences for achieving social integration. We have adult franchise but we also need knowledge of nature and scientific gadgets to be made available to the humblest housewife to prepare the country for democracy. Along with progress in the knowlege of nature must be promoted a visibility into the human consequences of this knowledge, and remedies for the maladjustments that follow from the imbalance in society created by the increasing scientific knowledge. To take an example, a costly medicine may be discovered for curing say, cancer. A few people in comfortable status alone are able to make use of this expensive remedy. This leads to "a-few-healthy" and "the-legion-ill" situation leading to constant social friction. Those who invent the medicine therefore have also the responsibility of devising ways and means of creating social agencies to carry the use of the medicine to all and sundry. In the absence

of these agencies, we have the pathetic situation in the country when a lot of useful research is available in sciences associated with agriculture, industry and medicine, but very few to make use of this. Those who believed that new knowledge by itself will stimulate its use have a cause to be disillusioned. The government has, here and there created agencies to promote the application of scientific knowledge to the people's mode of earning livelihood but the results have been poor. The failure of these agencies is often due to the fact that the research knowledge had been gathered to be made use of under ideal conditions of society which do not exist. When this knowledge is taken to the work-a-day situation there would emerge tremendous obstacles which defy commonsense solutions and can be overcome with the aid of further systematic scientific research alone.

In short, not only is it necessary for scientists to make discoveries, but it is also imperative that the social reference of these discoveries is elucidated and these discoveries are absorbed in the social texture. If this is conceded to, it will give rise to a host of problems which invite attention of scientists from different camps. Economists have to work out the relation of these discoveries with production and consumption of goods. Psychologists and Psychiatrists are required to work out the consequences of the discoveries for the personality and mental growth of the people touched by the discoveries. Sociologists, experts in jurisprudence and political scientists will have a word of wisdom to offer on the effect of the discovery on the more pervasive social institution. Above all the cultural anthropologists should be there to enlighten on the resistance to social change which is usually offered with the symbols with which students of simpler societies are familiar. A silent convergence of scientists from different disciplines on social problems has already resulted in a change in the boundaries of their sciences as also in their forging new concepts and categories of thinking. The rapid changes in the definition of psychology is an illustration in point. At the beginning of this century psychology was defined as description of conscious mental processes, such as ideas, impulses etc. This was replaced by another tendency of studying mind in terms of the objective situation. Now we have a psychology describing its subject matter as the balancing of the internal and external environments.

The ideal social science needed in an age of planning will be the one which makes it possible for the scientist to predict the social

consequences of a particular kind of social control or stress on humans and which will place such means at the disposal of man as may help him to manage these consequences. No one of the social sciences—economics, political science, sociology, jurisprudence, psychology or anthropology—can with the help of its own tools of thought currently in vogue predict social trends or the way a particular community or group will behave under the stress of, say, inflation, civil war, foreign invasion, or famine. Many forces—to take an illustration from the field of inter-group relations—have been located as causing inter-group tension, such as deficiency in bodily tissues caused by malaria and malnutrition, changing legal structure of land ownership, strain caused by housing conditions, inflation, friendship pattern, the unmanaged homosexuality, the teaching of history in schools, taboos on food and sex, the contrast between the rich and the poor etc. All these and many other forces can be disentangled in the inter-group tension situation to-day. No one of the above conditions if manipulated alone can reduce inter-group friction because every condition has its inter-lacing with other conditions. Take, for example, the non-availability of residential accommodation leading the "have-nots" to promote hatred against those having comfortable living accommodation. House is a wellknown symbol of mother and the frustration caused by the lack of housing accommodation brings all those consequences for the "have-nots" as mother-deprivation does for any child. There follows a relaxation from the socially acceptable behaviour acquired as a concession to the mother. The destructive revenge on the unsatisfactory accommodation that is made available to the "have-nots" carries the meaning of revenge on the frustrating mother. Some of the destructive dispositions released by the house shortage persist even after satisfactory accommodation is made available and enter into the social climate of the community to give a particular tone to the judgments of those once deprived of accommodation. The same with the human consequences of inflation, malaria and over-population. Now a mere acceleration of the house building enterprises or land reform does not and will not make for inter-group amity.

The need of the hour in science is to bring an integration in sciences, particularly those dealing with man. This integration has to be acquired through a revision of the conceptual tools and categories of thinking current in each science. This may very well lead to the creation of a single social science, or it may lead to the

creation of an altogether new social science, which will be constantly fed by the existing social sciences. What shape will the integration of social sciences take is an open question at present. The faith sustaining effort for creating the new social science will undoubtedly come from man's need to guide his destiny with the knowledge of his external and internal environments. The emergency of the new science had been forecast by August Comte a century ago when he wrote that a mature sociology is possible only after physics, chemistry, biology, and psychology have become scientific.

Scientific research planned with a bias for its application is not regarded as 'pure' science by those who believe in pursuing knowledge for its own sake. I am inclined to hold the opposite view. Contributions of an outstanding character have been made to 'pure' science by the scientists who were engaged in war work. In fact, institutes of technology have to undertake much more basic and 'pure' research than is often realised.

If group action for changing group relations becomes the guiding principle of research in social sciences, it will raise a host of problems of measurement of some of the subtle and elusive social phenomena. Behaviour of small groups, analysis and recording of inter-action of individuals in a group, measurement of social changes brought about by a new invention or a new legislation, field experiments in social change, etc. will come under experimental scrutiny. All this will pose problems of 'pure' character for logic, statistics, mathematics and many other branches of science.

The approach to scientific research suggested here—scientific knowledge to be taken not as an end by itself, but as instrumental knowledge—has been silently influencing the progress of science for the past few centuries. It is time that this approach be given recognition for planned research to promote unity of purpose in the various sections of the population and also amongst nations. This will result in achieving a much needed revision and the redefinition of the fields of science. The working out of the details of this revision for each science should form the subject of a special symposium.

Two broad objectives which scientific research in human affairs should endeavour to achieve call for immediate attention :—

(1) Very detailed research in the branch of psychology known as 'Individual Differences'. It is not enough for a man of action to know the general laws of the modifications of human behaviour. He must also know the operation of these laws in specific situations. Thus the process of informal group formation is determined by specific

needs of the individuals and the communication potency of these needs. And yet the friendship pattern in slums has features of its own which distinguish it from the friendship pattern current in the localities inhabited by upper classes. Each State in India has by now accumulated data on economic surveys of many occupational groups. Helpful observations on human nature in various occupations can be extracted from these reports for scientific scrutiny. All in all social scientists have to sensitize themselves to the specific and concrete settings in which the human nature works. It will help them to undertake further fact-finding projects for purposes of arriving at a workable diagnosis of a situation of social pathology.

(2) A mere diagnosis is not enough. A knowledge of the comparative values of various techniques of social control is absolutely necessary.

A word about the methods of social control which social scientists should experiment with to make democracy workable. Many methods of social control have been experimented with during the past few decades both by dictators in totalitarian states and advertisers of merchandise and politicians in democratic states.

The most popular method has been that of fraud. This method has been in operation in India for the past 15 years or so. Deliberate lies were perpetuated to achieve isolation of certain sections from other sections of the population resulting in misery for millions of people. All that this method achieved was to paralyse people's understanding of their real problems. This method makes it possible for a small and crafty group to exploitively coerce the rest of the population towards certain way of thinking and behaving. The confusion of issues is made palatable through the crafty group's building an all-inclusive ideology which offers facile explanation of every happening under the sun. This ideology is then offered as Aladin's lamp for all ills of the society. Worth of individuals in the society is then measured in terms of their ability to play a role in determining human relations envisaged in the ideology.

Kurt Lewin and Ronald Lippit created experimental situations to observe the influence of the 'Autocratic,' the '*Laissez faire*' and the 'Democratic' group climates on the group process. Results of these experiments make out a case for promoting democratic atmosphere in various social groups. No social control will work in our times which does not promote empathy in the members of the group—a capacity to view others as they view themselves. Very often people have the capacity to appreciate others as persons but this capacity

does not become a force in social affairs. To promote mental growth leading to empathy and to make it the basis of social control should be the aim of the social scientists experimenting with social control. The social conditions resisting empathy have to be studied. In other words, social controls must work with the consent of the individual and his spontaneous involvement in the decisions his group takes. This is an arduous task. Social scientists are almost at the same stage of their knowledge about man at which the pre Galilean physics was about nature. Many Galileos in social sciences experimenting with democratic social control feel that they are ploughing their lonely furrow. The accumulated knowledge flowing from their small experiments will certainly add to the wisdom of the man of action for democratic planning.

DIFFICULTIES OF DOING RESEARCH FOR SOCIAL ACTION.

The commonsense approach to the problem is no longer enough as is evident from the frustration of those striving to achieve the ideal human relations. The role of research in social sciences is therefore being slowly recognised to achieve the ideal. Economic research has by now been sufficiently recognised in most of the states in India as a pre-requisite to sound policy making on legislative and executive action. Those entrusted with policy making feel that given statistics and other factual data, they can forge a policy on the distribution of commodities which will be satisfying to all the parties concerned. While economic advisers are listened to, the ego of an administrator is deeply hurt if he is asked to supplement his commonsense with expert knowledge on the management of men. The role of sciences directly concerned with man—such as psychology, sociology and anthropology—in administrative matters has not yet been sufficiently appreciated. Many of the administrative measures become thereby less effective and instead of reducing add to the social tension.

The pathological consequences and social stresses caused by the state rationing essential commodities, like cloth, are well known. A survey of the earnings of the retail cloth vendors in a town in U. P. revealed, the striking fact that they could make no more than Rs. 18 per month if they strictly adhered to the government regulations prescribing limits on the quantity of the cloth they could sell as also on its price. In certain cases it was estimated that it did not even help the cloth vendors to pay for the maintenances of the business premises. The only alternative left, if they desired to continue in the trade, was to buy unauthorised cloth at a higher rate and sell it

at unauthorised rates; and that too under constant fear of the government inspecting staff and the police. Evidently, the human aspect of distribution in rationing needs scientific approach, as commonsense approach has failed to deliver the goods.

The first necessary condition for research on social action is the policy makers' realisation that they have a problem to solve in social-management which defies the commonsense approach. That alone can create favourable social atmosphere for research.

A need for research for social action is at present being vaguely felt by some prominent industrialists and administrators. In actual practice, however, leaders show a highly ambivalent attitude towards the expert's advice on social management. The resistance manifests itself in the following way:—

The expert advice, it is usually feared, will disturb the power relations currently operating amongst various social units in the group. To take an example, recently the manager of a factory sought advice on how to decrease the incidence of strikes. It was recommended to him that he should invite his employees' suggestion on the way the profits of the factory should be distributed. This advice was rejected outright because he was afraid lest the suggestions of the workers run counter to the policy of the financiers. After a good deal of persuasion the manager promised to give the recommendation a chance. His apprehensions about the workers asking more by way of bonus for themselves and less on investment in capital goods proved to be unwarranted. In fact the workers recommended more of the profits to be invested for the expansion of the industry to create opportunities of further employment for their kind.

The most difficult form this resistance takes is in a complete lack of faith in the expert on social engineering and was thus summed up by a business magnate: "Our psychologists live too much in the world of books. They have nothing to contribute to the solution of the real problems we have to face in industry."

This ambivalence reminds one of the attitude shown to psycho-analysts by their clients. The resistance is also expressed in the invitations to foreign experts to visit India to study social problems and submit reports. These are usually filed and status quo continues to govern the actual practice.

Many Indian social scientists react to the situation like raw psycho-analysts who inwardly accept the depreciation of their abilities as it comes from their clients. They therefore become timid and give up efforts at improvement of their skills through research and study.

This relation between social scientists in India and the potential users of their skills makes for extreme demoralization. This vicious circle can be broken through effort on both sides. The biggest resistance to be broken in bringing social sciences closer to those entrusted with policy making and social management in big plants is one centering round symbols of magic. The shyness of the social scientist in tackling problems of social management is due to his craving for perfectionism. He wants his recommendations to carry the potency of magic—sure, effective and unfailing remedy for all ills. This kind of faith is given to quacks only. A true scientist is not afraid of committing mistakes, arriving at tentative conclusions and revising his conclusions in the light of fresh data. The social scientist in India has therefore to learn to take risk. There are scientists who believe that they can answer questions of practical nature only where there are lots of light and where they can break the problem on hand in clear-cut issues. I believe that bad and blundering research is better than no research. It is only when bad research is examined, criticized and improved upon that designs and formulation of good research will follow.

What the social scientists have to learn to do—and this is quite a difficult task to undertake—is to select problems that have a present social meaning or are likely to have a meaning in the near future. Most of the time research problems are chosen in terms of the academic interests of the research scholar to prove or disprove an abstract theory. There is a general belief amongst scientists that the research for tracing the genesis of the present events is more important than the research which gets into the forces sustaining or modifying the event. To trace the origin of prejudice, for example, to the disturbed relation of anal ego and libido is considered more respectable than the changes that can be brought in the prejudiced perception. If research is to be socially acceptable the current contexts of events deserves much more attention than is given at present.

Another caution in doing research on social action that has to be kept in view is this. Results of the research must be presented in a useable form. No research worker can afford to live in the dream world of his pet theories if his work and profession are to play a part in current affairs. If one of the problems of youth education is the lack of secondary groups in his community of an educative character, the research must be directed to find ways and means for promoting new groups.

Again a social scientist if he expects that his findings are to become useable, must carefully study the barriers which effectively resist application of his research.

All this means the social scientist's acquiring an intimate knowledge of the social groups in which he works. In other words, social scientists can no longer remain aloof from the group which he has to study. A research worker has also to render social service as well. Psychologists who run counselling and guidance service to the young have been the best research workers as well. It is my experience that specialized social service has to be offered by the psychologist to the community or group he is studying if he wants to gain a familiarity with the group forces he proposes to control. It is now an accepted practice for departments of psychology to have their own model school or clinic as their laboratories.

Then there are tremendous possibilities opened through the psychologists sharing responsibility for running a community centre, medical service centre, boy scouts group, play centre for infants and adult education centre.

Experiments on inter-group relation can be carried on manageable groups such as students' hostels, play groups, boy scouts association, etc. The process of experimentation in small groups will help in devising suitable techniques of measurement as also the techniques of changing attitudes. Results obtained through experiments on small groups will have relevance for larger groups as well.

TOWARDS DIAGNOSIS

Race or religion consciousness is not an important factor in promoting inter-group hostility in India in its own right. There has been no demand for discriminatory legislation against any sections and there are no legal barriers put on the civic rights and privileges of any section of the population. The use of symbols of religion and race to undermine in a steady and sustained manner the rights and privileges of religious groups is rare in India. There have been stray examples of the people promoting inter-group strife in the name of religion, but these efforts do not become a pervasive trend and remain essentially of a sporadic character.

There is no denying the popularity of belief prevailing amongst certain sections of the population about one religious group trying to destroy another. A careful inquiry was conducted into this belief recently and the results had some surprises in store, for the research

team. Those who believed that their religious groups were being persecuted had had no personal experience of humiliation to report nor any for their near relatives and friends of the same religious persuasion. On the other hand, those who occasionally got rough deal on account of their religion treated this as a causal experience and did not build phantasies of becoming martyrs and persecuted on that score. They continued with their occupational pursuits which involved their frequently mixing with members of other religious groups even after humiliating experiences. Again the belief in being persecuted on the score of religion varied with the social and economic status of the believer. The lower middle classes and particularly the salaried classes had more acute fears of being ousted than the business class and the skilled workers. Both the skilled and the unskilled workers showed the least anxiety about being persecuted. Again symbols of race and religion have a way of being reactivated under situations of stress of a particular kind and do not maintain the same potency for collecting action tendencies round them.

Will it not therefore be a legitimate conclusion to draw that religion is not nuclear to in-group consciousness so far as inter-group hostility is concerned?

Religion is used as a symbol—the use of race as a symbol is rare in India—for investing the displaced energy of the frustrated needs. Government and political parties also serve as cathexis of a similar kind.

We must therefore look for the diagnosis of the pathology of human relations in the social contexts of the frustrated needs.

Some of the guidelines towards diagnosis of the pathology of group relations may now be mentioned.

(1) One of the most important context in which needs of the people in India are frustrated is the growing control of the bureaucracy over the elementary biological needs of the people. The relations of the government with the people until a few decades was very simple. The average man paid his taxes due from him to the Government and was in return protected against certain forms of inhumanities and against external danger. He was then left entirely to his own resources to manage the rest of his affairs. This state of affairs has been rapidly changing for the past few decades and particularly so after the World War I. People have to depend on the government for food and cloth. Reaction of infants to new and unfamiliar food is familiar to psychologists. The frustration on the

scores of food and cloth of inferior quality have far-reaching consequences for the infant and the same is true of adults. The perception of the rationed foodgrain causing gastric trouble is much more common than is commonly believed. Limitations on the consumption of food placed by the government is reacted to with personal helplessness by many people followed by a perception of the government as all-powerful and callous. Besides control on food and cloth, most people cannot freely buy the material they need to pursue their occupation as manufacturers. A weaver could formerly buy as much yarn as he liked to make cloth to keep all members of the family gainfully busy. The same with the metal worker, cloth vendor, publisher, etc. Some professions such as distillation and slaughter of cows were abolished in many places with the stroke of the pen with laudable motives no doubt, but without enough insight into the social consequences of these measures. This resulted in considerable unemployment both amongst those directly affected and also amongst those engaged in the related trades. The earnings of many families went down—in some cases reduced to one-fourth of their usual income. This resulted in a fall in standards of living of the people who were unable to get enough of raw material to pursue their trades. Others who found their trades deprecated as not respectable developed acute self-humiliation. The administrative personnel did not take sufficient pains towards re-orienting the population whose ways of earning livelihood had been affected by act of legislative. This increased competition in trades already overcrowded and promoted jealousy, meanness and other baser emotions. This sequence of event rather than religions is relevant to intergroup tension. Many skilled workers unable to pursue their trades join the rank of unskilled workers. This makes for increased competition, fall in the income of the unskilled worker and the corresponding meanness, jealousy and other baser emotions that go with it.

(2) The biggest need that is frustrated in the new context is the craving to know the meaning of the situation. The rural humanity which forms the bulk of the Indian population had until recently been used to a face to face relation both as masters and serfs with conventions of rich co-operative life made palatable through a religion centering round the virtues of obedience and charity. The government of the country in this setting appeared to most people like a distant horizon which was reached only by criminals and men of influence. This humanity has now to face a government charged with the function of keeping a certain balance of inter-

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national trade, certain defence preparation in terms of the international situation and problems of currency and inflation. And all this means the governmental interference in the day-to-day life of the people. The passive and masochistic attitude towards the government of the country has been the characteristic of the masses. "The government are our parents" sums up the perception of many a simple people. This attitude is reciprocated by many in the government departments with equally aggressive and sadistic notion. Unable to appreciate the new functions of the government their frustrations take the form of blaming the government, the caste and classes from which the Government officers hail. The public was used to carry their complaints to an open Darbar of the king which resulted in quick justice. Now they have to face a government which has inherited the tradition of promoting a sense of impersonality in the whole administrative and where no one single officer can take a decision in his own right without involving in his decision all those who ought to be involved. This makes for sloth at a time when people need quick decision on problems which touch their daily needs of a biogenic character. Many bureaucrats who are intelligent, alert and are capable of taking correct decision have to end by becoming a cog in the whole machine. Those who try to take quick decisions are snubbed as "trying to be smart." Thus the whole lot of very capable and intelligent officers have to adjust themselves to a situation where no single officer knows fully the meaning of the policy. Most of the time their energy is directed towards maintaining a certain relation of harmony with other officers in the department. A public used to personalizing the government and not appreciative of it as an institution and the government most of the time adjusting itself to inner friction within the government personnel promotes subjectivity in the public-government relations at a time when the main function of the government is fast centering round the exploitation of natural resources for the good of the people in as objective and scientific way as possible.

(3) The lack of communication between the government and the public is evidently there and leads to the most pathological results. Psychoanalysts are familiar with the passive and masochistic individuals developing paranoic symptoms of blaming others. If kindness and sympathy come their way in the psycho-analytical situation from their analysts their symptoms begin to wear out. In the absence of good channels of communication between the masses and the government symptoms of paranoia appearing amongst masses is understandable.

Castes which supply recruits to the government departments are commented upon and so also the political party which does the policy making for the country. The lot of the government officers on the other hand is no better. They are as passive as the public in the job situation and develop irrational fears and look for sympathy and understanding from their bosses as also from the members of the ruling party. Only those who are politically educated and know the changing function of the government can bring poise and stability in their outlook.

The same kind of passivity is encouraged in most of the industrial concerns and in trade unions. Craftsmen belonging to a particular trade have to have their demands put forward through a political worker who himself is not a craftsman. And hence whatever little of the trade unionism is there in the country promotes passivity amongst the workers.

Towards new goals in improving human relations

A careful scrutiny of the available data reveals that tension between religious groups is not caused by religious perception and the way of life based in religious experience. Religion becomes a convenient peg for hanging hostility caused on a different plane and the problem is to locate the spots at which disaffection is originally generated. The first thing to be recognised in this connection is the growing gap between the public and its leaders which has widened with the growing complexity of the social structure. The public seek to achieve their goals determined by biogenic needs and want to come straight to the goals like the animals in psychological experiments, without much care for the means. Their leaders on their part—in the government, industry and the financial organisations—are more concerned with goals within goals and means within means resulting in all kinds of barriers to the public's finding their way to what they want. Thus leaders and their public are put on different paths. This results in growing apathy in the public for the policies formulated by their leaders. Since they cannot influence these policies they become suspicious of their leaders and the groups on which frustration is then projected.

There is no way to keep the government and the Parliament informed of the reaction of the different sections of the public to the policies. This makes for low morale and confusion. This state of affairs can be met with through a scientifically planned action as has

been repeatedly pointed out in the course of this statement. The research in social tension sponsored by the Government of India is a step in this direction. This research aims at showing the way people rationalize their discontent, the predisposing facts which give rise to it, the way it manifests and the areas of the society it affects the most.

The following steps are necessary to make the scientific approach effective in action :—

(1) *The setting up of the channels of communication between the public and the Government.* The Government have to keep itself continuously informed on the thinking and the behaviour of the public on the following scores :—

(a) Adjustment to economic affairs. (*i*) The economic situation in families of different social strata and their reaction and adjustment to inflation, tremendous rise in taxes and other acts of legislation. (*ii*) Trends in debts, savings, buying and their human consequences. (*iii*) Adjustment to controls, shortage of consumer goods, etc.

(b) Adjustment to legislation of a social and political character. The new legislations resulting in the tenants acquiring the right to buy land, the village Panchayats acquiring magisterial power, the landlords' consciousness of their waning prestige, have released antithetical tendencies releasing sadistic and aggressive forces which had maintained the subjugation of a large section of the population. The manner in which adjustment to this aggression is silently taking place, the new institutions which are being created to manage thir aggression should be the subject of careful enquiry.

(c) The communication as it exists between various sections of the population. Under this the perception that one group has about the other has to be carefully studied. The following groups need special attention :—(*i*) Producers of goods and the consumers of goods. (*ii*) Financiers and those who have the potentialities to invest. (*iii*) The Government welfare agencies and their clients. (*iv*) The public and their representatives in local and legislative bodies. (*v*) Communication between various cultural groups.

(d) The way foreign affairs—and particularly the Pakistan affairs, are perceived by the Public is very much relevant to the Indian situation. The consequences it has on the share market and the morale of the various sections of the population is anothor problem on which the government has to be kept constantly informed.

(2) *Influencing policy makers.* A research into how the public think and feel on various vital issues will not lead anywhere if this is

not reflected in the decisions of the Government. To sensitize the heterogeneous individuals and groups in the decision-making bodies to the findings of scientific surveys is no easy task. The following difficulties are met with in involving policy-makers in the scientific findings on the public behaviour:—(*i*) The findings of research if implemented would require new adjustment on the part of the policy makers. Many policy makers have the zeal to change their policy, but not the necessary ability and the new skills which they have to bring into exercise to make the change a real one. The change in established habits is met with status quo. (*ii*) Along with the acquiring of new skills scientific findings imply change in roles, new attitude towards the public, and a change in power relations.

In fact the situation requires a continuous re-education. This problem throws out a host of problems for psychologists to experiment with. Data on the psychology of arriving at a decision by a group, roles taken up by the various members of the group in the discussion, the community background of the group in which decisions are taken or decisons are resisted, and techniques of improving administrative skills are some of the problems that come to notice.

(3) *Involving the public in carrying out the policies.* Most people remain indifferent to policies of vital importance to them. The active participation of the citizens in the democratic process is absent at present. Research is needed to find out in locating key leadership and the method of securing the collaboration of these leaders for establishing channels of communication with the national leadership and to discover methods of reaching the population unattached to any groups to give effect to national policies. To train a large section of the population in new skills, to make new policies effective will be necessary. The details of this training are a virgin soil for Indian social scientists to try their skills on.

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SOME INDIAN DREAM THEORIES

A Study and a Comparison with Western Views

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In sleep we are almost unconscious and hence it was believed by many formerly, that it has no use in life. 'Why try to prolong life if so much of it is to be spent asleep ?' is a question long since asked by Kant who advised early rising and decrease of the hours devoted to sleep.[1] Sleep has, therefore, sometimes been regarded to be unworthy of being seriously studied and hence the benefits it may bring to mankind have been ignored. But after all it is not absolutely unconnected with life and its normal conditions. On the contrary, life being essentially painful and troublesome to most human beings, it is a blessing to them that they can count on getting some relief occasionally from being able to take shelter in the cool chamber of sleep. Sleep is conducive to physical and mental health. In order to avoid pain, to forget the bitterness of the unpleasant experiences of life, to gain new energies after prolonged mental or physical labour we look forward to sleep. We know the acute sufferings of the persons who have insomnia and we could easily imagine, therefore, what would be our condition if we were unable to sleep. So a study of sleep and its significance in life is certain to be of very great interest and usefulness to everyone. As Macario remarks, "there is no more interesting subject of study, for it concerns the highest questions of physiology, hygiene, pathology and psychology."[2]

If sleep were merely a monotonous condition of weakened consciousness or absolute unconsciousness, men would possibly find nothing very interesting in its study and would remain content only with the knowledge that it is conducive to health. But then there happens an incident in sleep which has vastly increased its importance. This incident, *viz.*, dream, being complex, elusive, mysterious and strange in nature arouses much interest in us and has for many years and in many quarters of the world, been regarded as an abnormal phenomenon. Whether it is really an abnormal condition of life or whether the breach between it and normal life can easily be made up will perhaps be made clear, to a great extent, if we study the different theories of dreams propounded by different men at different

times. Obviously the scope of such a study is much too large for a short essay like the present one and therefore, I shall confine my discussion here to a comparative study of some of the ancient Indian conceptions of dreams as to their nature and significance in life, along with some allied theories of a few western psychologists and philosophers.

Dreams in Indian thought have been divided into about six classes in accordance with their nature and origin. They are as follows:—(1) dreams due to peripheral stimulation and other organic disorders; (2) dreams due to subconscious impressions; (3) dreams for fulfilment of desires; (4) prophetic or veridical dreams; (5) telepathic dreams or dream—coincidences; and (6) dreams-within-dreams or dream-end-cognitions. I shall now proceed to discuss the various Indian theories of dreams taking the above divisions one by one.

1. Dreams due to peripheral stimulation and other organic disorders:—These are similar to illusions in our waking life as there is always a physiological stimulation, coming either from outside or internal regions of the organism, present, but to a great extent, modified and extended as to its interpretation.

According to some Nyāya-Vaiśeṣika theories the materials of a dream do not come from pure imagination or memory. Even if that were so, some positive associative link must have intervened between the ideas of imagination or memory and their revival. And as such there is always some physiological stimulation, either peripheral or internal, present, so that a dream may take place. Udayana says that during ordinary sleep the senses are not absolutely closed to stimulations, the mind remains in contact with them, though of course, in a very confused way. But this slight contact is enough to give rise to some dream images following the laws of association. In the absence of sense-stimulation the perception of the heat of the body produced in the skin gives rise to dream-images. But during sound sleep when no dream is experienced the mind loses all connection with the senses, comes away even from the skin and takes shelter somewhere near the heart and thus remains at absolute rest.[3]

"As reminiscence results from a particular conjunction of the soul and the internal organ, so also does cognition in dreaming. Dreaming consciousness is the intellection of the internal organ..... This is of three kinds.....It arises partly from derangement of the bodily affections, wind, bile and phlegm. Of these, one under disorder of flatulency experiences transit through the air, wandering about on the earth, fleeing with fear from tigers &c.; another by the excess

of the derangement caused by inordinate secretion of bile experiences entrance into fire, the embracing of flames of fire and sees golden mountains ;.....&c. ; another through predominance of phlegmatic disorder experiences passages through the seas, immersions in rivers and sprinklings with showers of rain, and sees mountains of silver and the like." [4]

"Text (97) : When the sense-organs have ceased to function, and the mind has retired, then there come about certain mental cognisings through the sense-organs ; and it is these that constitute *Dream-cognition*."

Beings tired by their exertions during the day caused by their conscious bodily actions, retire at night with a view either to rest or enable their food to be digested, and then the connection of the self and the internal organs, brought about by an effort due to the force of a number of unseen agencies, causes certain functionings in the mind ; and then the mind retires peacefully into the heart which is the organless region of the self ; and then it is said to have 'retired.' The mind having thus 'retired,' the organs of the man cease to function. In this state the processes of inbreathings and outbreathings going on profusely, from such causes as (1) 'Sleep' which is the name of a particular state of contact of self with the mind and (2) impresions of previous cognitions,—there appears, through the sense-organs, a dream-cognition, resembling direct sense-cognition, with regard to objects that have no real existence." [5]

This dream-cognition is of three kinds, dreams due to the disorders of bodily humours forming one. About these dreams Sridhara says as follows "We find that a man in whose constitution, wind is the predominating humour, often sees (in a dream) that he is flying in the sky, and so forth [6]."

In the commentary it is said that "the 'humours of the body' are serum, flesh, fat, marrow, bone and semen ; and these are called 'dhatu' because they hold or support the body (dhāranat), and when these are deranged by disorders of wind, bile and phlegm, then there appear certain misconceptions" [7].

Sivādityā says that dream is the sign of sleep. In other words, the mind being perverted by sleep gives rise to dreams. Mind, in dream takes shelter in some organless region, thus losing all its connections with the sense-organs. Dream-experience has been distinguished by Sivādityā from waking experience with all its objective reference, from the Yogic experiences, and from waking illusions.[8]

So we see that all the above writers agree at least on one point, that during sleep the mind is not altogether unconscious. It continues to function in contact with the self. Dream, therefore, according to them, is a definite, direct and positive mental perception either internal or external, of images. Hence all the above views come under one head, *viz.*, the Presentative theory of dreams.

Some Vedāntists " maintain that the dream-world is a new construction " thus giving us the presentative theory of dreams. Hence it is told in the Brihadāranyaka that " there are no chariots, no horses nor any road, but he himself creates the road, the chariots, the horses, there are no joys, no pleasures, nor any blessings, but he creates the joy and blessings, there are no ponds and rivers but he creates them because he is indeed the maker."

The real fact is that the Vedantist argues from the metaphysical point of view. He says that in an illusory perception of waking life we do not see an object as another but the object of illusory perception is actually produced at that time and place. The object thus produced is nothing but an indefinable (anirvacanīya) illusory reality (prātibhāsika). Likewise, dream-cognitions are illusory perceptions, during sleep, of illusory realities. So long as the dream-cognitions last, the unreal objects actually produced at that time and place also continue to exist. The objects produced both in the illusory perceptions of waking and dream-experiences differ from those of right perception and the objects of the latter are called the empirical realities (Vyavahārika). Dream-knowledge is cancelled by waking knowledge and both of them are cancelled by Brahma-jnāna.

A section of the Nyāya-vaiśeṣika school offers a somewhat different type of presentative theory of dreams. According to them we see one object as another in the illusory perceptions of both waking and dream experiences. According to the Samkarites, therefore, the reality is falsely produced and according to the Nyāya-Vaiśeṣika the observation is wrong.

Dreams, according to Caraka, are of seven kinds. Of these dreams arising from any disorder within the organism are called *doṣaja Swapna*. They are due to certain positive physiological sensations and hence presentative in character.

The Bauddha-view of dream is as follows :—" Whether dreams are perceived by the senses, or by thought?.....When scenes are reproduced automatically in a dream with our eyes closed, the obvious inference is that we see them by way of the door of mind. Even in the case of peripheral stimulations, as when a light brought near a

sleeping man's eye, is mistaken for a bonfire, it is this exaggerated light that is perceived in a dream by the mind door. The possibility of the presentation of all the six classes of objects to the mind has been referred to. But the dream generally takes the form of a vision. Hence the phrase *Supinan Passati*, to see a dream. If these presentations do not come from without, they must come from within, from the 'inner' activities of mind. That is to say, if peripheral stimulations are absent we must look to the automatic activity of mind itself for the source of these presentations; or, to speak in terms of physiology, we must look to the central activity of the cerebrum, which is now generally admitted to be the physical counterpart of the five doors in an 'organized sentient existence' (Pañca-vokārābhava). Substituting these physiological terms for their psychological counterparts, cerebrum is the instrument by which we dream, and it is with the same that we go to sleep or wake up..... There are dreams due to organic and muscular disturbances, generally seen, according to Nāgasena, by the flatulent, the phlegmatic, or the bilious, [9]." There are also three other kinds.

So the ancient Naiyāyikas, the Vaiśeṣika school in general, Gautama, Vātsāyana and some Bauddhas regard dream as presentative in character and not as pure recollection. It may be pointed out that the phenomenon of dream has been regarded by ancient Indians as having been originated by some physiological; peripheral or internal conditions in which the mind always remains active whether in contact with sense-organs or not. And in this sense dream is not absolutely discontinuous with life.

2. Dreams due to subconscious impressions :—According to this view dream is a kind of recollection—a memory of past experiences due to the intensity of the subconscious impressions left by a recent experience (Samskārapāṭava) [10]. If we fall asleep after thinking intently about some person or thing, very often it happens that the series of thoughts produces a series of memory-images, which are manifested in consciousness as immediate sense-presentations owing to the strength of subconscious impressions. It is clear that these dreams are purely hallucinatory in character.

Though the ancient Naiyāyikas regarded dream as presentative in character, the majority of the medieval and modern Naiyāyikas hold them to be representative in character.

Jayasimhasūri says that dream is a form of recollection. He distinguishes two kinds of illusion. The first is the illusory perception of waking experience in which we falsely ascribe one percept to

another (anubhūyamaṅāropa) and the second is dream-experience in which we falsely ascribe an idea of memory to a percept (Smaryamānāropa).

In dream the thing memorised is experienced in a different space-time context from that in which it was experienced in waking life. It may be doubted if one thing perceived in certain context can be memorised in quite a different context. His answer is that this can be proved by reference to daily experience, and one cannot be sceptical about one's own experience [11].

Jagadiśa, Jayanta Bhaṭṭa, Keśava Miśra and the Mīmāmsakas like Praśasthasārathimisra, Kumārila and others hold that dream is a form of recollection of objects experienced in the past in some other place. Kumārila further clarifies his position by distinguishing the dream-experience from the waking experience with reference to Yogic experience. "(90-94) the fact of waking cognitions being the contradictory of dream-cognition is known to all persons.

Here the objection arises: 'of such waking cognitions as those of the post, &c., invalidating cognitions do arise in the shape of those of the true Yogis (who know all things worldly to be false) and this would certainly make these waking cognitions equal to dream-cognitions (in point of falsity). And such invalidating cognitions too (as those of Yogis) would belong to all living creatures when they reach the Yogic stage; and hence the fact of waking cognitions having invalidating counter-cognitions become established'.

The answer is: But such Yogic cognition is not found to belong to any person in this life, and as for those who have reached the Yogic state, we know not what happens to them [12]".

Prabhākara explains both the waking illusions and dream-illusions by his theory of obscuration of memory. The objects of both illusory perception and dream-experience appear to consciousness as direct and immediate sense-presentations because of lapse of memory (Smṛti-pramosa) but in fact they are mere reproductions of past experience. Their representative character just drops out of consciousness and hence they appear as direct percepts.

Some Vedāntists have propounded the representative theory of dreams. Saṁkara seems to be in the main a supporter of the same and accordingly, at the end of his commentary on the sixth aphorism (3, 2, 6) holds that the dream world is not actually created by the soul, but is a reproduction of the impressions of waking-presentations left in the subconscious.

According to the Praśna-Upanisad "what is seen over and over again, he sees once more in dream, what is heard over and over again, he hears once again." This description emphasizes the subjective and representative nature of dream-experiences. In dreams what actually take place are new constructions or spontaneous groupings of the impressions of past experiences and not new creations.

Śalikānāth in Prakaraṇapañcikā expresses similar views on dreams.

In answer to the representative theory of dreams Udayana says that we do never experience the objects of dreams as something remembered. For example, we do not have any dream in such a form as "we remember this". Nor on waking from sleep do we remember the dream-experiences in such a form as "we remembered this". On the contrary we remember dream-experiences as actual perception.

So also some Saṁkarites give the reply that in dream-experience we are conscious of the fact that "we see a chariot" and not of the fact that "we remember a chariot". And on waking from sleep, we know through introspection that "we saw a chariot" and not that "we remembered a chariot in dream". Moreover, the objects of dream-experience are never perceived in waking experience in an indentical space-time context and as such they are regarded as actual perceptions and not as mere recollections of waking experiences.

3. Dream for fulfilment of desires:—"Some dreams take place only as fulfilment of desires long cherished. Such dreams have been included under the head of hallucinations as there is no positive internal or peripheral stimulation present.

Accordingly Caraka says that some dreams are about those objects which are desired (Prārthita). Madhusudana in Sidhāntabindu says that when the sense-organs cease to function, the objects which are desired by the mind appear as perceptions or the dream-experiences. It has been said that in a state of passivity desires get freedom and acquire strength, finally appearing in the form of dreams [13]. Saṁkara also recognises the influence of desires in dream-cognitions.

To sum up then, dreams have sometimes been called illusions and sometimes hallucinations, both arising from strength of past impressions and desires, by the Indian thinkers. Now we may proceed to compare their views with those of a few western psychologists and philosophers, particularly Sully, Wundt, Bergson and Freud.

According to Sully, "the phantasms of sleep are abnormal in as much as they assume the character of sense-phenomena which do not correspond with the real external world of the moment, *viz.*, illusions and hallucinations".[14] Dreams are evidently connected with a

temporary disturbance of cerebral conditions. Although akin to hallucinations they are to be distinguished from the latter because the occurrence is regular and periodic. Moreover, they benefit the organism by promoting nutrition and recuperation which does not happen in the case of a hallucination.

Wundt says in his 'Outlines of Psychology' : "The ideas which arise in *dreams* come, at least to a great extent, from sensations, especially from those of the general sense, and are therefore mostly illusions of fancy, probably only seldom pure memory ideas which have become hallucinations". He is of opinion that sleep, dreams and hypnosis though they differ from one another, in their origin, are essentially the same in their psycho-physical conditions. The physiological conditions underlying the above mental states, have, of course, not been investigated directly, but we may assume from the psychological symptoms which they show, a general theory about them. He calls it the *principle of compensation of function*. It implies, in general, "the inhibition of activity in the regions connected with processes of volition and apperception, and increased excitability of the sensory centres. It is then, strictly speaking, a physiological problem to formulate a theory of sleep, dreams and hypnosis".

Bergson says, "In natural sleep our senses are by no means closed to external impressions. If we close our eyes we shall even then continue to perceive some, colour blotches, sometimes dull, sometimes of singular brilliancy. Physiologists and psychologists have described them as 'light-dust', 'ocular spectra', 'phosphenes'. They attribute the appearances to the slight modifications which are ceaselessly taking place in the circulation of blood in the retina, or the pressure which the closed lid exerts upon the eyeball, causing a mechanical excitation of the optic nerve" [15]. The appearances which no doubt supply 'such stuff as dreams are made on,' are vague and indefinite. It is 'memory' which converts them into definite and precise objects of dreams. So only through the union between sensation and memory can we have the experience of a dream.

So while to Sully a dream may be both an illusion and hallucination and to Bergson the combined effect of illusion and hallucination, to Wundt it is more an illusion than a hallucination. We may point out here the fact that the theory of Udayana resembles, to a great extent, those of the above three modern Western thinkers in holding up the physiological background lying behind the dream-phenomenon. And to none of them dream appears as an abnormal phenomenon.

As regards the "wish-fulfilment" theory of dreams we have seen that the Indian thinkers have not failed to recognise this factor in them, though, unlike Freud, they do not go to the extent of describing the desire to be definitely sexual in nature. Here we may quote what Bergson says in this connection "the memories which are preserved in these obscure depths are for us in the state of invisible phantoms. They aspire, perhaps to the light." [16] Sometimes these repressed memories begin to rush together to the door of consciousness and among them those are admitted which could claim relationship with the present situation, *i.e.*, actual perception of the person concerned.

4. Prophetic or veridical dreams:—It is a very old practice among Indians to regard dreams as foretelling future either good or bad, and it is to this practice that we may trace the attempt of interpreting dreams even in ancient days. According to the Indian conception the auspicious dreams are due to a certain merit (dharma) of the persons, and the inauspicious, to a certain demerit (adharma). They are sometimes found to be connected with past unobserved experiences and sometimes with future. But merit and demerit are supernatural agents and the above explanations are, therefore, held to be superstitious and unscientific. Both the Nyāyā-Vaiśeṣikas and the Bauddhas recognise this sort of dream. Mr. Aung in his 'Compendium of Philosophy' describes this kind of dream as due to "the force of character of clairvoyant dreamers".

5. Telepathic dreams or dream-coincidences:—Mr. Aung enumerates four kinds of dreams among which the third one is called the telepathic dream. He describes this kind of dream in the following manner:—"The third will, no doubt, be stigmatized in the West as the superstitious theory. But as the devas, or mythical beings as they would be termed in the West, are according to the Buddhism, but different grades of sentient beings in the thirty-one stages of existence described in Part V of the Manual, the theory in question merely recognises the suggestive action of mind on mind, and may therefore, be aptly called the telepathic theory." [17] It is to be added here that this type of dream has been specially recognised by the Bauddhas because of the special theory of existence of thirty-one stages. Here we may take notice of the remark made by Wundt in this connection. "Dreams and hypnosis are often made the subjects of mystical and fanciful hypotheses, in some cases even by psychologists. We hear of increased mental activity in dreams and of influence of mind on minds at a distance in dreams and hypnosis...

In reality all that can stand the light of thorough examination in these phenomena is in general readily explicable on psychological and physiological ground; what is not explicable in this way has always proved on closer examination to be superstitious self-deception or intentional fraud." [18]

6. Dream-within-dreams or dream-end cognitions:—Sometimes we have a consciousness in dream-experience that we are dreaming. Here one dream becomes the object of another. This sort of dream-experience takes place when the sense-organs cease to function and is called Svapnāntika-jnāna or dream-end-cognition by Gangānāth Jha. That these dream-end-cognitions differ from ordinary dream-cognition has been rightly pointed out by Praśastapāda, Sridhara, Samkara Misra and others. They say that dream-cognitions are presentative in character while dream-end cognitions are representative inasmuch as they are aroused by the traces left in the mind by the former.

Now we are in a position to declare with some amount of definiteness that in a dream we do not lose all our connection with life. In dream we almost lose our waking consciousness but consciousness continues to function during this period, perhaps more vigorously than it does in the waking state. And through this continuation of function the life of the individual is reflected only with a touch of colour and novelty. The presence of this colour and novelty is the contribution of imagination. Hence Maudsley remarks "It would be no exaggeration to say that dramatic power of a dunce in dreaming exceeds that which is displayed by the most imaginative writer in his waking state". Through dream we get recreation and thus be able to forget the drudgery and monotony of life. "Novalis remarks that dreams serve as a breastplate against the monotony and triviality of real life, and declares with truth that without dreams we should grow older much more rapidly". [19] Though it sounds almost incredible, it is a fact that many writers, scientists, philosophers, poets and priests have received in dreams the most helpful suggestions and hints of what is their greatest contribution to mankind.. "A Russian proverb says that the morning is the time to make up one's mind; and there are German, French, English and Italian proverbs to the effect that the morning hour has gold in its mouth, that we must always sleep over an important resolution and that night brings counsel." [20]

Indian thinkers have not failed to recognise the significance of dreams in life and hence much of their time has been devoted to the exploration of their meaning. Almost all who have studied the

dream phenomenon are of opinion that it is specially connected with physiology. Hence the medical utility of it has been given much importance. Thus they could prevent or cure many dangerous and troublesome diseases by interpreting the dreams of ailing persons with a view to discover their physiological significance. This was possible in the cases of both adults and children. As firmly as they believe in the immortality of the soul—the theory of continuity of consciousness through innumerable generations—they hold dreams also sometimes to participate in this special function. Dreams are, according to them to a great extent, reminders of our previous existences.

We may conclude the article with a reference to a similar idea found in a Western writer : "Thus in the psychic life of sleep we are brought into a vaguer and larger world than we are conscious of during waking life, the world of our once forgotten past, and the world, it may be also, of the forgotten past of the race. It is in that perhaps that the charm of dreams largely lies. In the hereditary transmission of the characters of the physical and psychic organism the continuity of the germ-plasm as Weismann calls it, or the ideoplasm as Nāgeli terms it—nothing is lost. They are transmitted unconsciously. But we may perhaps dare to glance into a dim future when consciousness will have so vastly developed that it may reach back to embrace all that our ancestors felt and lived and have handed on to us as an organic patrimony. The men of science of that day will be called upon to investigate, not only the continuity of the germ-plasm but the great secret of the continuity of consciousness through innumerable generations which follow and replace one another to infinity, bound together by that indestructible consciousness" [21].

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15 Mind—Energy—H. Bergson, Ch. on 'Dreams'.
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18 Outlines of Psychology—W. Wundt, p. 314
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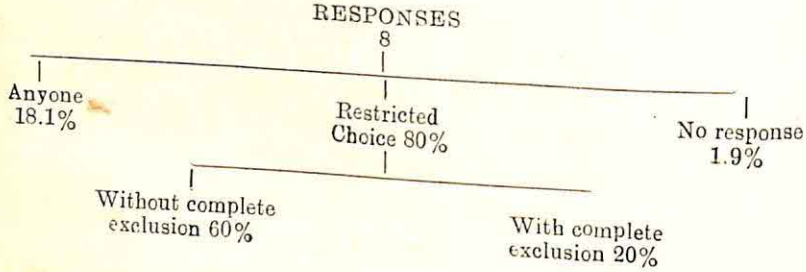
RESULTS

As is the common experience with this test, it was found that sometimes many steps on the test were skipped. A group would be admitted to kinship but not as a neighbour or guest. Though a respondent would admit all the groups to take food with him in his dining room, he would pick and choose the groups out of which he would form acquaintances. In spite of the anomalies the test has yielded some valuable insight into the attitude of each of the groups studied to the other groups.

An over-all picture of the responses is given by the figure below :



107 students (86 men and 21 women) constituting 18.1% declared that they are prepared to admit any member of the eight groups to every kind of six relationships indicated. Many of these wrote on the paper that they do not take caste and creed into consideration in their social relationships with the various groups.

TABLE I

Showing the proportion of the 'All-inclusive' individuals in terms of caste, creed and language.

Caste and Creed	N	%	Language Group.	N	%
Brahmins	118	16.5	Tamil	203	11.8
Non-Brahmins	290	22.1	Telugu	145	23.4
Christians	77	9.1	Malayalam	130	18.5
Muslims	36	13.9	Kannada	64	18.8
			Other	49	10.2
Total :—	591	...	...	591	...

We observe that every caste and creed and every linguistic group contributes its own quota of 'all-inclusive' individuals. The Non-Brahmin and Telugu groups contribute the most and the christians and non-Dravidian language groups the least.

On the other hand 118 (73 men and 45 women) completely excluded one or more groups from every kind of social relationship.[1] The 118 people gave 350 total exclusive responses making an average of 2.9 responses.

TABLE II

Showing the frequency of exclusion Responses, groups making them, and the order of preference of the eight groups according to exclusion.

Excluding Group.	N.	Fr,	Excluded Group.	Fr,	Preference Order.
Brahmin Men	116	31	Brahmin	43	3.5
" Women	72	40	Christian	25	1
Non-Brahmin Men	223	158	Harijan	51	6
" " Women	67	47	High Caste Non-Brahmin	31	2
Christian Men	27	23			
" Women	50	38	Low Caste Non-Brahmin	53	7
Muslim Men	31	12	Muslim	46	5
" Women	5	1	Parsi	43	3.5
			Sikh	58	8
Total 8 Groups	591	350	8 Groups	350	...

We observe that members of every group tested exclude some group or the other. On the other hand, we find that each one of the eight groups is excluded to a higher or lower degree. Christians and High Caste Non-Brahmins are excluded the least often and Harijans, Lower Caste Non-Brahmins and Sikhs are excluded the most often from every kind of Social Relationship.

Let us now analyse the responses of the remaining 355 people who belong to neither of the two groups above, *i.e.*, who are neither totally cosmopolitan like the 107 people who are prepared to admit any group to any degree of Social Relationship nor like 118 people who are not prepared to admit some groups to even the least degree of Social Relationship.

The method adopted in the analysis of the responses of this group was to find out the number of 'Yes' responses of each individual for each group for the six relationships. Then the number of 'Yeses' for each of the eight given groups is found and this was taken to

1. While constructing the test a seventh item 'have nothing to do' was thought of. But since the groups mentioned are all Indians it was presumed that the inclusion of such a relationship of complete exclusion may not be necessary. The test, however, showed that a complete exclusion relationship is necessary even when we are testing attitude towards groups constituting the body politic.

indicate the measure of his willingness to admit the given group into his social relations. The greater the number of 'Yeses' for a given group the nearer in his Social Relationship to it, and the smaller the number of 'Yeses' the farther is the group from him, the greater the Social distance. Thus the magnitude of 'Yeses' was taken as an indication of the degree of 'social distance'.[1]

The next table gives the distribution of Preference responses for each of the eight given groups among the various castes and creeds studied.

TABLE III

Showing the distribution of Preferences.

PREFERENCE RESPONSES

Given Group.	Brahmins		Non-Brahmins		Christians	Muslims
	Men	Women	Men	Women		
N	80	75	165	54	69	30
Brahmins	505	311	593	191	293	99
Christians	372	228	657	221	374	112
Harijans	330	194	620	190	253	88
High Caste, N. B.	408	240	713	261	268	104
Low Caste, N. B.	351	209	698	213	251	103
Muslims	310	189	552	193	286	133
Parsi	364	213	589	196	250	102
Sikh	331	199	567	187	240	83

TABLE IV

Showing the eight given groups in order of preference for each caste and creed.

Order of Preference	Brahmin		Non-Brahmin		Christians	Muslims
	Men	Women	Men	Women		
First	Brahmin	Brahmin	H.C.N.B.[2]	H.C.N.B.	Christian	Muslim
Second	H.C.N.B.	H.C.N.B.	L.C.N.B.[3]	Christian	Muslim	Christian
Third	Christian	Christian	Christian	L.C.N.B.	H.C.N.B	H.C.N.B.
Fourth	Parsi	Parsi	Harijan	Parsi	Harijan	L.C.N.B.
Fifth	Sikh	L.C.N.B.	Brahmin	Muslim	L.C.N.B.	Parsi
Sixth	L.C.N.B.	Sikh	Parsi	Brahmin	Parsi	Brahmin
Seventh	Harijan	Harijan	Sikh	Harijan	Sikh	Harijan
Last	Muslim	Muslim	Muslim	Sikh	Brahmin	Sikh

[1] An attempt was made to give weightage to each relationship, but it was found that there was hardly any difference between the raw data and weighted scores. So the results are treated on the basis of raw data.

[2] H.C.N.B. High Caste Non-Brahmin.

[3] L.C.N.B. Lower Caste Non-Brahmin.

Though we do not find much difference between the order of preference of men and women among Brahmins there is some difference among the men and women of Non-Brahmins, particularly with reference to the position of Harijans and Muslims.

High Caste Non-Brahmins and Christians get a high place, within the first three among the various groups. Harijans get the seventh place four times and fourth place twice. Brahmin men and women and Non-Brahmins men give the last place to Muslims. Brahmins are given the fifth place by Non-Brahmin men, the sixth place by Non-Brahmin women and Muslims and the last place by Christian.

The following table gives the order of Preference for the whole group of 473 people on the basis of 'Yes' responses and the order of Preference of 118 people on the basis of 'No' responses.[1]

TABLE V

Showing the Preference order according to inclusion responses and according to exclusion responses.

PREFERENCE ORDER

Given Group	Yes Responses.	Exclusion Responses.
Brahmins	3	3.5
Christians	2	1
Harijans	5	6
H.C.N.B.	1	2
L.C.N.B.	4	7
Muslim	7	5
Parsi	6	3.5
Sikh	8	8

We thus find a big shift only in the rank of Lower Caste Non-Brahmins (L.C.N.B.) and Parsis. Otherwise there is a good degree of agreement. The Rho is 0.73 ± 0.107. This shows that there is a high degree of internal consistency in the Social Distance test.

[1] See Table 2 above.

THE NATURE OF TENDER IMPULSES IN ORPHANS

(A study of a few children of an orphanage)

J. C. DAS GUPTA (CALCUTTA)

I

This paper incorporates some findings about the nature of love-life of orphans living for more than 5 to 7 years at Banipur State Orphanage. The principal instrument used in the psychological investigation was the Test of Tenderness devised by the author. The work was undertaken mainly because of two reasons: (1) The love-urges of orphans showed a number of peculiarities. The precise nature of those as well as causes underlying them were tried to be understood and (2) to see how far—quantitatively as well as qualitatively—the test of tenderness is able to discriminate the orphans who were starved of natural affection of parents from the normal children who are fortunate enough to get steady parental love. In other words, our object was as much to understand children as to be convinced of the validity of our measuring instrument.

Banipur State Orphanage is run by the West Bengal State Government. It was established in just after famine to provide food and shelter to children whose parents died or were economically incapaciated by prevailing famine conditions. Another large group of children afterward joined whose parents fell victim to the last Hindu-Muslim riot in undivided Bengal. After partition of India, sons and daughters of economically helpless refugee parents found shelter in this orphanage.

The number of children—both boys and girls—living in the orphanage is at present 417. The age of boys varies from 2 or 3 to 18, while that of girls is between 2 or 3 and 12 years.

It is necessary to describe briefly how children live in the orphanage. There are some cottages (where once Royal Air Force people lived—these cottages were called billets). Each cottage has two or three big dormitories where children live. There are cottage mothers to look after children. One mother is entrusted with the care of 40 to 45 children. Previously about 2 years ago, the mothers

had to look after 55 to 60 children each. A child belongs to a group (of children) and a mother is placed in the charge of the group. But the child sometimes has to change his group and there is also change of mother for a group. The latter happened in the past rather too frequently and it was found that within one year and a half a group (therefore, a child) had successively four mothers. Recently a feeling seems to have grown against this frequent change of mother. Boys when they are 9, 10 or eleven years of age are placed under the care of male teachers and in some such cases there are reasons to believe that boys, especially when they are young, appear to be neglected. Let us add a few words about the cottage mothers. The majority of them are widows. Some of them are married and their husbands are living. Their age range from 30 years to 50 years. The standard of their general education is low and they have not undergone any special training for their occupation. Most of the children at Banipur State Orphanage are not strictly speaking, orphans,—one of the parents—either their father or in most cases their mother are living. These children are allowed to visit their parents from time to time. A small number of children are orphans. We have examined this latter group of children. We have selected only those who do not know any of their relatives. These children are, therefore, deprived of any occasional visit to their relatives' homes—an opportunity enjoyed by the majority of children of the orphanage. Nor any relative ever comes to visit them there. We have mostly confined ourselves in examining children between 9 and 11 years of age and those who are in the orphanage for the last five, six or seven years. Most of the orphans joined the orphanage when they were three years old. A few joined when they were four years old. 66% of them were picked up from the street during the last famine in 1944 and 1945. The parents probably in most cases starved and perished. 25% of orphans were admitted into the orphanage by their distant relatives, (or these cases 9% seem to be unwanted or shall we say illegitimate children). We cannot say how the other 9% of orphans came to the orphanage.

These children are, thus, in the orphanage for relatively a long time. Moreover, they passed here a part of their life which, in the formation of one's character, is of fundamental importance (*i.e.*, the first five or six years of life). We may thus claim that these children typify to a large measure orphans who have breathed deeply in the atmosphere of state orphanage, and their character is largely formed by orphanage conditions of life. We have tested almost all the children

of the orphanage who have fulfilled the aforesaid conditions. We found possible to test 19 girls and 12 boys. The following table shows the average score of the children. We are, side by side, giving the average score of normal children so that the difference between normal children and orphans may be noted.

TABLE I.

Comparative score of orphans & normal children.

Subjects.	Number.	Wish to love.		Wish to be loved.	
		Mean.	Standard Deviation.	Mean.	Standard Deviation.
Orphans	31	16.5	7.5	20.4	11
Children from normal homes (parents living)	47	22.5	11	37.5	10.5
		Difference—6 in Mean Scores (wish to love)		Difference—17.1 in Mean Scores (wish to be loved)	

The difference of 6 between the mean scores of wish to love of orphans and children having parents is statistically quite significant. The critical ratio is 2.8 and 2.8 for 77 degrees of freedom indicates that the difference in mean is significant at ·01 level.

So is also true of the difference of 17.1 between the mean scores of wish for love of the two groups of children. The critical ratio is about 7. Let us discuss the distinguishing characters of the orphans' wish to love & wish to be loved one by one. We shall consider the wish to love first. We have been told by the matron, the cottage mothers and teachers, that the orphans compared to normal children (By normal children we shall mean here children whose parents are living) are generally more selfish in nature.

The spontaneous giving which forms an essential part of the wish to love is rarer in them. We believe that loving younger ones is also an important characteristic of the wish to love. The orphan children, we examined, enjoyed ample opportunities to love children younger than they. In the orphanage there is a good number of children below 5 or 6 years of age and these children quite often need help from the older children. Inspite of such opportunities, it was found on the basis of our test (as well as on independent evidences) that younger children only form 23% of the persons orphans love, while with normal children young children form 50% of their love-objects.

It is not, however, true that orphans without exception are subnormal in the ability to love. There is considerable overlapping of orphans and normal children in matter of their wish to love. Table II shows the percentage of children—orphans and normal group—in terms of their standard score when the groups are considered together and one mean and one standard deviation are computed. This is a perfectly legitimate procedure as orphans form a real part of children in general.

TABLE II.

Standard score	All children (78)	Normal children (47)	Orphans. (31)
plus 1.5 upwards	3%	8%	0%
,, +1 to +1.5	17%	29%	0%
,, +.5 to +1	6%	0%	13.5%
,, +.5 to −.5	46%	48%	39%
−.5 to −1	22%	15%	34%
−1 to −1.5	6%	0%	13.5%
−1.5 downward	0%	0%	0%

It is clear from the above table that the considerable number of orphans are capable of loving like normal children. But almost half of them is below average in matter of loving if the limit is of course taken at −.5 standard score. It has not been possible for us to find an orphan who is endowed with really a superior ability to love (*i.e.*, whose score range above +1 standard score). We shall now say something about the nature of the wish for love in orphans. We teachers of the college used to go to the primary school attached to Banipur State Orphanage and took part in teaching those children. What struck all of us is the intense longing for love from us on the part of the majority of children. Most of the orphans we examined were included in that group of children. Some of them greeted us every day with shout and laughter, they often kept looking at us, they were at least very much conscious of our presence, they tried to sit near us and get our physical contact and as we returned asked us often if we were going back there on the next day etc. As compared to them, the normal group of children whom we teach in the present experimental school of the college, seeks very much less love from us. Not that they are not responsive to teachers' affection, but they are not too conscious of the love nor helplessly dependent on it. The orphans on the other hand appeared to suffer from too great

a love-dependance on their teachers and therefore, less a degree of self-possession. In the beginning it was not sufficiently realised that the phenomenon was a little bit pathological nor we were able to understand the causes underlying such intense desire for love. Lastly we lazily believed that these children, for reasons little understood, ask for more love than normal children. We were, therefore, a little surprised when we found, with the help of our test, that the mean wish for love scores of these children is significantly and positively lower than the corresponding mean of normal children. It was clear on the basis of answers children provided to our questionnaire as well on the basis of independent evidences supplied by persons in intimate daily contact with children, that children's intense wish for love is very much localised to college teachers who sometimes go and teach them. From most persons, other than college teachers, they desire moderate or more often, little love. It is not difficult to understand one important cause of such discrimination on the part of children. As we had already occasion to observe, the wish for love and the fact of getting love bear close relationship to each other. The child very often wants love from the person from whom he gets it. As most of the college teachers went there for an experimental purpose, they encouraged children to justify their manifold wishes and rarely, if at all, used with them any stern disciplinary measure. Above all, the college teachers loved, or had to appear to love those unfortunate children. Children could not but feel grateful to persons who, if only for a short time, partly satisfied their long unsatisfied deepest need. It may be said on the basis of psycho-analytical experiences that such wish to be loved appears all the more intense and dramatic because of an anxiety on the part of children. The unhappy experiences of life have developed in them some distrust in human love. As they do not quietly believe that their wish to be loved will be adequately satisfied by college teachers, they clamourously seek love from them. As they always feel that there is a mental distance between them and elders, they try to do away with the mental distance with the help of physical proximity. The wish for love from any person goes with getting of love from him or her is further corroborated by some other replies of children. Children who regarded that their cottage mothers love them, said in reply to our query if the children want the love of the cottage mothers—yes, very much. According to more than 50% of normal children, parents love them most and of them over 50% seek their parents' love very much, while the rest seeks love moderately.

The orphans seek love less than normal children. There are good reasons to suppose that it is only elders who substantially justify children's wish for love. We shall, therefore, expect that comparatively small percentage of orphans believe * that they are loved by elders. As a matter of fact only 20% of orphans think that they are loved by elders while 90% of normal children claim that they are fortunate enough to get elders' love. It may be mentioned here that 20% of orphans mentioned children two or three years older than they as those who love the former.

We, thus, find that the majority of orphans believe that they are not loved by elders. It is not, however, possible for children (or even for adults) to calmly accept that they are not loved. It is an inherent need lying in each human breast that he or she must be loved. The orphans, when no adults seem to love, turn naturally to friends. 40% of orphans report that they are loved by their friends. It is not true that normal children do not enjoy the love of their friends. Yet no child between 9 and 11 years of age that we could examine mentioned his or her friends in reply to our questions—'Name three persons in order who love you most.' The love they get from elders puts the love of their friends into shade.†

Here again we find that there is considerable overlapping, 30% of children, if the normal range be taken between −.5 & +.5 score or 59% of children if +1 and −1 standard scores be regarded as limits of normal

TABLE III

Distribution of children in their wish to be loved

Standard scores	All children	Normal children	Orphans
Above plus 1	30%	46.6%	0%
plus .5 to plus 1	9%	6.6%	15%
−.5 to plus .5	32%	40%	15%
−.5 to −1	9%	0%	21%
−1 downward	20%	0%	49%

* Freud has demonstratively proved that the child's such beliefs are of psychological consequences and sometimes cause mental disturbances. Such belief may not fully accord with fact. In the present instance children's belief that they are not adequately loved by elders are, however, largely true.

† As children grow older, especially when they reach adolescence, the situation steadily changes. They outgrow their love-dependance on elders and come to value friends more and more. It is not uncommon to hear from an adolescent or an adult that he or she is loved by friends.

range, appear normal in their wish to be loved. Table III shows the comparative distribution of normal children and orphans on the basis of one mean and one standard deviation.

It has been noted by our readers that about 50% of children are subnormal as far as their wish for love is considered while 46.6% of children who are fortunate enough to enjoy parental care and affection, seek love more than the average.

We have already found with normal children that there is a significant sex difference in matter of love. We were not wholly surprised, therefore, when a similar sex difference was noted with orphans.

The following table represents the mean difference between boys and girls in both their wish to love and wish to be loved.

TABLE IV

Comparative Scores of orphan boys and orphan girls

Subjects	Number	Wish to love		Wish to be loved	
		Mean	Standard Deviation	Mean	Standard Deviation
Boys	12	19.8	7.3	17.6	11.8
Girls	19	14.4	7.6	22	10
Difference in favour of boys +5.4				Difference in favour of girls +4.4	

Similar to what was found in cases of normal children, girls wish to be loved more than boys. Boys, on the other hand, show some superiority in loving than girls (amongst normal cases the difference between boys and girls in matter of loving was found to be negligible).

We have not calculated whether such difference is statistically significant. As the number is too small, it would not be worth while to do so. Because of the fact that a similar difference was also noted in cases of normal children, we are inclined to believe that if other samples in West Bengal are tested, a sex-difference of similar nature would evince.

It would be clear, as we shall proceed, that we are trying to account for such mean differences chiefly by some significant differences in the environment in which boys and girls live. It is true that such differences in environment do not hold true in some parts of the world. It may be that such sex-differences would be largely absent in those countries.

One of the reasons why boys wish less love than girls lies in the fact that they are beaten more frequently by elders. Such unhappy

experiences teach them to associate elders with beatings. The boys to the extent of 60% tried to explain their dislike of elders by saying that elders beat us. As far as girls are concerned, only 11% gave similar explanation. It is not, however, true that girls believe that they are loved more than boys. 40% of boys while 33% of girls believe that they are loved by elders. As we try to understand why boys in the orphanage love more than girls, one thing draws our immediate attention. Most of the girls examined are very much more inhibited and withdrawn. Time taken by girls to answer the questionnaire was often three times more than time taken by boys. They spoke slowly and there was quite large gap of silence between the author's a good many number of questions and children's responses. Some children at certain stage of the test withdrew their rapport and refused to talk. The author spent many minutes to restore the rapport and make them talk.* It is not difficult to understand children who so display diminished interest in life and persons, would be found to love persons less. Loving is an activity—an outgoing tendency while orphan girls, we examined, were relatively ingoing in nature. With the general lowering of outgoing tendencies in their life, their ability to love has also been affected.

II

The love-life of orphans show marks of disturbances in more respects than one. The normal cases, we examined, were found to like children of their age without any exception. 26% of orphans reported that they *do not like* children of the same age. The normal children at that age do not, however, show any deep attachment to friends. Friends are rarely mentioned by them as those whom they love. It is different with orphans. Friends constitute 37% of persons they love.

As far as loving the elders are concerned there is not much difference between orphans and normal children. While the former

* In our attempt to discover the causes of such desurgency (or even schizoid tendencies) in children, we may remember that discipline of orphanage as far as girls are concerned are much more restraining and inhibitive than what is possible to impose on boys. The boys enjoy more freedom and opportunities for self-assertion through games and sports, while girls in the orphanage find comparatively little to do so. They are constantly taught what they ought not to do. But boys are often punished. It is no wonder, therefore, that as boys grow old, they would express their resentment by showing wayward tendencies—while thanks to the inhibited nature of the environment, the girls would tend to withdraw into themselves.

group loves the elders to 26%, the latter group loves them to the extent of 36%. A seemingly unexpected result is obtained as we try to know if children dislike elders. 70% of normal children expressed their dislike of elders while from amongst orphans only 49% did so. Both the figures are significant enough and we elders should learn to put up with the fact that children between 9 to 11 years quite often dislike us. This fact is quite well-known to Psycho-analytical investigators, but others do not seem to know the fact perhaps because they do not like to know it. Now how are we to interpret the fact that the percentage of normal children expressing their dislike of elders is considerably greater than that of orphans? Are we to say that normal children dislike elders more than orphans? We do not think so. The difference lies more in the expression than in the fact. The normal children enjoy unconditional parental love and thus the needed emotional sucurity. The world of elders outside their family does not appear to them indispensable for their very existence. Most children further feel that their parental love will not be withdrawn from them even if they dislike (or more truly express their dislike for them). In other words, the normal children dare express their dislike for elders. Compare the orphans with the normal children. They have no parents to love them unconditionally. They must depend on the love and charity of the outside world of adults. Such love is quite often neither unconditional nor stable. The children know that they must behave. They should neither disobey elders nor dislike them. It is no wonder that such children will feel afraid to express their dislike and resentment against elders.

We shall now describe some other difficulties that orphan-children display. The first question, after I have known the essential facts about the child and the members of his family, I asked was—"Tell me—who loves whom." The question makes use the well-known projective technique and would readily reveal the uppermost thought and belief in the child's mind. To this question—the answers may be divided into four types: (1) Replies in which both subjects as well as objects are concrete and individual *e.g.* My mother loves me. (2) Replies in which either the subject or the object is concrete, while the other is general. *e.g.* I love every one or Elders love me. (3) Replies in which subjects and objects may be regarded as at once concrete and general. When a child says that the mother loves her child, he often expresses the truth that his mother loves him only in a general form. So is true of a husband who says, the husband loves his wife. He thereby expresses a concrete truth using two general

terms. (4) Replies in which both the subject as well as the object are general: *e.g.* Man loves man; all persons love all other persons etc. The following table shows the distribution of replies to the question—who loves whom:

TABLE V

	Elders	Normal children	Orphans
Subject and object both concrete.	40%	100%	59%
Subject or object concrete (the other general)	0%	0%	13%
Subject and object both general and concrete.	53%	0%	7%
Subject and object both general.	7%	0%	21%

Any psychological interview is an intensely personal affair. It encourages thinking and talking in personal terms. It is no wondor, therefore, that even elders who often in their detached impersonal life and writings talk in generalities, would use in an emotional test general terms meaning also general thing—comparatively rarely. In a psychological interview, talking in general terms meaning also general things may be regarded as an evasion or a product of mental conflict. When the form is general but the content is particular—the matter is somewhat different. We must recognise that adults have attained intellectual maturity and acquired a habit of using general form of expression. Though even there an evasive tendency may work, the tendency may be, for our present purpose, largely overlocked. But when children use such general form of expression, the matter needs somewhat a different explanation. Neither intelligence nor their education have progressed so far as to accustom them to talk in general propositions. When orphan children speak in generalities it quite probably means that individuals have not struck their roots deeply into their lives since no individuals loved them enough and for quite a long time. It has not been possible for their emotional life to clasp closely any definite object. In other words, their emotional life still retains a degree of instinctive character. There is, yet, a lack of any definite object to which the instinct may deeply attach itself and thus appear as a full-blown sentiment.

Love is a kind of fixation. The replies of a few orphan children furnish further evidences that the fixation of emotion to the object has not attained sufficient strength. They show uncertainty in matter of love. One child, for example, says in reply to one of our ques-

tions—that Nimai, a friend of his, loves him. To another question the same child replies—no one loves me.* To our question—'Name three persons who love you best'—a girl gave a list of friends. As I asked the question for the second time—she mentioned the matron and two cottage mothers. Such change indicates that she is not adequately convinced of their love for her. She is not sure. That is why she seems to say, perhaps. A loves me or perhaps it is B. There are two other instances in which similar uncertainties can be noted.

One more thing worths mention. Two orphan children were found to reverse the natural order of replies to two questions whom the child loves and who loves the child. Children quite often provide the same list of persons as replies to both the questions. When the list is different, it is natural that children will mention friends or younger children as replies to the former question while they will mention the names of elders as replies to the later question.

Four orphans mentioned mother-like persons to the first question, while to the second question they mentioned their friends. This probably indicates that in them wish to love and wish to be loved have not sufficiently been separated or defused. This explanation seems all the more true as we have found in some cases by questioning that the distinction between two question, *i.e.*, whom they love and who loves them are not fully realized. The normal children at this age learns to distinguish the two propensities fairly well. Such confusion, as will be discussed in a future paper, marks much younger boys and girls.

* Such uncertainty is even sometimes noticed in children who have enjoyed normal love. Their need, for deeper reasons, often refuses to be satisfied by normal gratification. One of such deeper reasons is the sense of guilt on the part of the child. It is always very difficult for a child suffering from a strong sense of guilt to believe that he is really loved. It is also true of children who cherish powerful repressed anger against elders. He projects his hatred on to adults and believes that he is hated by elders. The defect in such cases lies more in the child (mostly in child's unconsciousness) than in the environment. With most orphans, it would be more reasonable to suppose that their uncertainty about love lies mainly in the fact that they are not loved enough. They disbelieve love because they have not got it.

PSYCHOLOGY OF SCHIZOPHRENIA*

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In this article I have used the term schizophrenia to denote dementia praecox of Kraepelin with all its subvarieties. According to him it is a kind of mental disorder which usually takes place during the adolescent period and its prominent symptom being withdrawal of interest from the surroundings and mental deterioration which in some cases may turn out to be complete dementia of a permanent nature. It was Bleuler who first introduced the term schizophrenia to designate these cases as he thought this new nomenclature would remove some of the drawbacks of the Kraepelin's term. He found out that in many instances this disorder takes place outside the adolescent period and moreover dementia praecox is a misnomer. He on the other hand, as the term schizophrenia implies gave more emphasis on splitting of the personality. According to him it involves affective life and expresses itself in the disorder of feeling, conduct and thought and an increasing withdrawal of interest from the environment resulting in many cases in complete deterioration of entire personality.

Symptoms in this disorder are innumerable but some of them stand out more prominently than others. The most prominent symptom being apathy and most of the patients appear to be emotionally blunted. He does not seem to appreciate joy, sorrow and fear and his attitude is one of indifference to his condition. He seemed to have lost all touch with reality and lives a life with which it is not easy for others to make contact. A disharmony between mood and the thought is also noticeable. A schizophrenic may express ideas without any show of emotions which in ordinary persons would produce anger, remorse and sense of depression.

We have already mentioned that Kraepelin divided this disorder into several subvarieties. Though the above mentioned characteristics would be present in all the varieties each one will have its own complex. In hebephrenic variety hallucinations, and causeless laughter and weeping are noticed. In paranoid variety the delusions of grandeur and persecution are prominent features and some authorities

* Read before the 39th Indian Science Congress held in Calcutta, 1952.

do not like to include them under schizophrenia. In catatonic variety the common symptoms are negativism, the refusal of food, mutism, neologism, stereotypy, flexibitus cerea and verbigeration, etc. In the simple variety there is an absence of any definite trend like the other varieties. These cases simply show lack of interest in their surroundings.

Regarding the aetiology of this disorder there are differences of opinion among the workers. Kraepelin, Mot and others believed that it originates from metabolic disorder as a result of disturbances in the endocrine system. Kretschmer gave emphasis on the peculiarity of the body built of these cases who are mostly of asthenic type and believed that persons with asthenic type of body built are liable to suffer from schizophrenia. Adolf Meyar's approach to the investigation of this disorder was psychological. He claimed that schizophrenia is the outcome of progressive maladaptation of the individual to his environment. Freud, Bleuler and Jung believed that this disorder is essentially a functional one. Jung believes that only the introverted persons are liable to suffer from this disorder.

Freud's View

As in the cases of neurosis Freud's approach to this psychotic disorder was psychoanalytical. He tried to explain the origin of this disorder with the help of his libido theory. According to him in normal persons the libido or the energy of the sex instinct would remain fixed to the outside object and for that reason their normal interest in the outside object could be maintained. According to him what happened in schizophrenia is that libido is withdrawn from the outside object and gets fixed to the ego ; it is due to the withdrawal of libido that most of the symptoms of schizophrenia like the lack of interest in the outside world and the dull and apathetic attitude, etc., are produced. Megalomanic and persecutory delusions could also be explained by this view. Freud believes that any object which is invested with excessive amount of libido would be overestimated as he thinks it is libido only which sets value to external objects. This mechanism could be clearly studied in normal love relation where a loved object is usually overestimated. The working of the same mechanism could be noticed in the sphere of abnormal phenomena also. In schizophrenia when libido would be withdrawn from the outside objects and become fixed to the self there would be a similar overestimation of ego. This overestimation of self ultimately turns

out to be the delusion of grandeur. He believes that the delusion of persecution would be produced as a result of making a fresh attempt to refix the libido to the outside objects and this attempt not being very successful outside objects would appear as hostile. Outside objects would appear to be hostile as love could not be properly fixed to them but the hostile feeling towards them would assert itself due to the inherent ambivalency of emotion in these cases. Other schizophrenic symptoms would be similarly produced as a result of success or failure of fixation of libido to different levels of sexual development. According to Freud this disorder should be placed under Narcissistic disorder along with paranoia.

My view on Schizophrenia

There is no doubt that Freud's theory of Schizophrenia can explain a large number of facts of schizophrenia very satisfactorily which have not been hitherto explained by any other theory. His libido theory and the view of withdrawal of libido from the outside object and its regression to ego are certainly very helpful in understanding the complicated mental mechanism behind the schizophrenic disorder. But I consider that his view on regression of libido to ego position requires further elucidation. My observations on schizophrenic patients have taught me that a schizophrenic's ego is not exactly like the ego of a normal adult person. A schizophrenic's ego just like an infant's immature ego would easily get merged into its object and in this state there would hardly exist any difference between the ego and its object. It is due to this nature of the schizophrenic ego that it loses all contact with the oustide world and becomes absorbed in itself. Now question arises how could one's ego be changed to this atate? Freud believes it happens when one's libido is withdrawn to the self from the object. In connection with the mechanism of super-ego formation he has said that when a love object is abandoned a mental image of the object would be internalised and it would be added to the ego system and in this way a new organisation would be created in the mind which would be known as super-ego. Freud has described this mechanism in connection with the withdrawl of libido from the oedipus object. There is reason to believe that a similar phenomena would be noticed at the time of onset of schizophrenia when libido would be withdrawn from the object in a massive way. As in this state there would be no external object the patient's libido would be fixed to

the internal object only and it is due to the fixation of the libido to the internal objects that the peculiarities of the schizophrenic ego is produced.

Now question arises what necessitates the withdrawal of libido from the outside objects which leads to a mental break down? Before we attempt to answer this question I think it would be better to consider some very important symptoms which are usually present at the time of the onset of the illness in most of the cases. They are fear of death and the idea of the end of the world. Freud believes that the idea of the end of the world appears as a result of projection of the idea of one's own death. Next question that we have to answer is the significance of this fear of death.

Fear of Death

This fear of death appears in diverse forms. Sometimes it takes the form of delusion of poisoning and the patient would stubbornly refuse food. Sometimes it would be so vague that the patient would not be able to explain the nature of this fear. He would say perhaps he would die if he defaecated and would consequently refrain from this act or would eat his own faeces. Sometimes he would express the fear of being drowned. Some times he would have vague idea of committing suicide. Many patients again express the phantasy of going into the mother's womb.

Phantasy of going into the Mother's Womb

I have reason to believe that this fear of death and the idea of the end of the world take their origin from the phantasy of going into the mother's womb. And now we are in a position to answer the question regarding the necessity of withdrawal of libido from outside objects which has been raised previously. In a previous paper I have shown that the withdrawl of libido would take place when the desire for going into the mother's womb be very strong and it could not be satisfied in a sublimated form any longer. (Delusion of persecution. Samiksa No. 4, 1949). In that paper I had tried to show that the delusion of poisoning and the fear of death appear in schizophrenic patient as a result of defence against the unconscious wish of going into the mother's womb. The original wish of going into the mother's womb due to the displacement upward would be converted into the wish of being eaten up by the mother. That this mechanism

is true would be evident by the phantasy of a large number of schizophrenic patients who have expressed this idea openly. In the association of an obsessional neurotic patient I have found on many occasions that the appearance of the wish to introduce his whole body inside the mother's womb was invariably followed by the desire of eating her up.

The original wish to be eaten up will have to pass through several phases before its reversal to the opposite could be completed. In the first phase we noticed that the desire to be eaten up had been changed into the fear of being eaten up. In the second phase the wish has been already turned round on the subject and he is showing the desire to devour but it is being interfered by the persistence of the fear of death of the previous phase. In the third phase we find the active desire of eating is being interfered by the sense of guilt. Many patients express the desire of eating up of their parents or dear or near ones but at the same time express that it would be a sin to do so as they would be no more then. In the fourth phase the reversal would be completed and the subject would be able to devour the object without any interference and in this phase the subject will develop megalomania. Many patients would express that the idea that they have become a big person by eating up of their parents or any other big persons who are substitutes of their parents, as he will believe that he has been converted into those objects by eating them up. Thus the original wish of going into the mother's womb and getting merged with her gets satisfied even after its reversal.

So from this theory one will have a clear understanding how delusions would be formed out of the desire of going into the mother's womb. As the act of the going into the mother's womb would appear as death hence in many such cases the fear of death might manifest itself just at the onset of the illness. In some cases on the contrary the fear of destruction of the world would be the prominent symptom and this symptom might appear from the fear of the destruction of the mother image due to oral incorporation or due to the projection of one's own fear of death to the mother image which would be equated to the outside world.

Schizophrenic Drawings

The corroboration of the above theory could be found in the drawings of the schizophrenic patients also. Most of the schizo-

phrenic patients would draw a particular type of pattern. It consists of circles or ellipses or squares and in their centres there would be similar geometrical figures but very small in size and from these centres innumerable circles or squares as may be present in a particular drawing would be moving along the radii towards the circumference. But this movement would be ultimately checked though in some drawings it would be shown that some smaller drawings had managed to come out of the bigger ones by overcoming all obstructions. One patient drew a picture in which he showed that a big bird had shallowed a small bird and he wrote under it that as he was tasty like mango pickle he was eaten up by his father. He too also ate up his father and now he did not know whether he was inside his father or his father was inside him. A female patient drew a circle and put a grown up person in a foetal position inside it and said that it represented her in her mother's womb or she was pregnant. A female schizophrenic patient drew several ellipses and according to her they were her sex organs or her mother's sex organs. In one of the ellipses she drew a small circle and wrote underneath it that she was staying inside her mother's womb and she drew straight line from the inner circle to the outside of the ellipses and wrote that the line indicated the path along which she would come out of the mother's womb. In another drawing of similar type the ellipse was her own genital and the straight line was the path along which her father or mother substitute would enter into her genital. She also expressed the phantasy of eating up of her father and mother substitute or being eaten up by them and thus becoming transformed into them alternately. These drawings are clear as patients themselves wrote notes underneath these drawings which explained them. Those drawings in which small circles inside a big circle were trying to come out also expressed the desire of going into the mother's womb and also the attempt to come out of it and this phantasy has become obscured here due to symbolisation and condensation. According to Rorschach any centrifugal movement in such a drawing would convey the active desire of coming out of the state in which the subject has been placed and the centripetal movement on the contrary the attitude of passive submission to such a condition. I have found that most of the pictures in which patient's phantasies were projected with the sense of centrifugal movement were drawn at the time when patients were coming out of the catatonic state and on the contrary pictures with centripetal movements were drawn at a time when catatonic reactions were becoming

stronger (Schizophrenic drawings by the author. Samiksa No. 1, 1951).

Suicidal phantasy

Many schizophrenic patients would develop suicidal tendency like depressive cases and many more would develop phantasy of committing suicide but would never attempt to do so. A female patient who often expressed the desire of committing suicide would often refuse food at times as she thought her food contained poison and that poison was being administered by her mother. But surprisingly she would again say that she had become changed into her mother as a result of her ingesting heavenly poison given by her mother. She explained that she had died as a result of her ingesting poison but her mother was staying inside her body so she had become her mother. She went on saying that death was a necessity as through this process she would be able to go into her mother's womb once more and would be rejuvinated and consequently get a new lease of life. Another schizophrenic patient also expressed the desire of killing himself but the best way of doing so was according to him to go into the mother's womb but he wanted rebirth also. Another schizophrenic patient wanted to kill herself by drowning and she went on saying that there would be heavy rainfall causing severe flood and she should take shelter in Noa's ark but would not be able to save herself as she is destined to be drowned. Another patient complained that two or three elderly women were exerting magnetic pull towards him and he felt that if he went near them he would be gobbled up by them but he decided to go near them as he thought it would be the best way of committing suicide. But later on he was under the impression that he himself had gobbled up these women. Through the suicidal desire he was really expressing the desire of going into the mother's womb and the oral incorporating idea was later on developed by the patient as a defence.

As with the body of an adult it is not possible to go into the mother's womb so these patients adopted the idea of committing suicide as it is the nearest reality approach that a wish of this nature can take up. A schizophrenic patient of mine tells me that it is death only which gives him the chance of going into the mother's womb and rebirth later on. The idea of rebirth is equally strong like wish of going into the mother's womb in these cases. Bose has described a case who used to have a phantasy that a series of women

were standing in front of him and he would enter into their body through their mouth and later on come out through their genitals.

Through diverse facts of schizophrenia such as delusion formation, drawings, suicidal tendencies I have tried to show that the desire of going into the mother's womb is very prominent features in schizophrenia and I believe that the withdrawal of libido from the outside objects as Freud has described would take place when this wish would actively seek satisfaction and the withdrawn libido would be fixed to the internalised external objects but no synthesis would be formed between these newly formed internal objects and the already existing super Ego. Any schizophrenic symptoms such as hallucinations are produced when attempts are made to exteriorise the internal objects once more.

Now one might ask why the libido be fixed to the internal objects after it has been withdrawn from outside objects. In order to answer this question we have to know the mechanism of withdrawal of libido. By the withdrawal of libido I understand the mechanism of incorporation of loved external objects inside the subject either by oral or some other method, a process whose help was taken in the infancy when super-ego formation took place at the passing of the Oedipus phase. I have already shown that the desire of going into the mother's womb which is usually translated as a desire of being eaten up would be opposed by the wish to eat up the mother or father image. Associated with this libidinal regression there would be a great change in the ego also which will have the character of the undeveloped ego of the Narcissistic stage in which the feeling of omnipotence would be prominent. It is due to this feeling that the patient would easily believe that all the external objects have been internalised and he will have to pass through the same process which he had experienced at the time of super-ego formation once more. There will be a conflict between the internalised object and ego and the nature of which has been already described in connection with the delusion formation. In normal person the strength of the ego is maintained when harmony is maintained between ego and super-ego and super-ego would not oppose the attempt of libidinal satisfaction in the reality on the part of the ego. But now after the withdrawal of libido there would be no reality for the ego and the libidinal object and the super ego would be converted into the same object.

In this state as there would be no necessity for using language for communication or paying attention to the outside world, these

patients would be usually dull and apathetic and mute but internally they will experience all the thoughts and feelings which are usually experienced by paranoid patients. If anybody could record the phantasies of a catatonic patient it would be full of aggressive thoughts but these patients do not become aggressive towards anybody as they feel no need for it. Firstly objects of aggression are all internal. Secondly due to the feeling of omnipotence they think that merely wishing to kill a person would be enough to kill him. I have collected a large number of neologistic words of a catatonic patient and found that their creation was needed for the expression of aggressive phantasies. This expression of aggression in words though in a clothed form shows that attempts are being made to exteriorise once more the internalised objects and in paranoid schizophrenia it becomes partially successful. I said partially because in this state though the patient could communicate with outside world still he would believe that there exist some persons inside him. In this condition he will have libidinous attachment both to the inside and outside objects.

Cure in such cases would take place if internalised objects become fused with ego and consequently internalised object libido would be converted into ego libido which would then have a free access for flowing back to external object once more. This is only repetition of a process which took place in the infancy during the development of libido. I believe that a child comes to narcissistic state when he thinks that he has incorporated his parents at the end of the auto erotic state and that parental images get fused with his immature ego. I believe that this mechanism of fusion of internalied objects and Ego lies behind the process of identification. I have already said that incorporation of parental images are needed for checking the desire of going into the mother's womb. In narcissistic state this checking would be complete and then only one can take up external objects for libidinal satisfaction.

I believe that in those persons who become victims of psychotic disorder this fusion between ego and super-ego is never perfect and conflict between these two institutions will go on even when libido has been fixed to the external objects. And if for some reason or other this conflict becomes intensified and the fusion between the ego and the super-ego is lost then once more the wish for going into the mother's womb would be revived and the libido would be withdrawn from the outside object.

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A STUDY OF CATTELL'S DISPOSITIONS TEST AND THE RELATION BETWEEN THE DISPOSITION OF CURIOSITY AND INTELLIGENCE

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PART I

Mc. Dougall has defined disposition "as the sum total of a man's propensities. The strength of the several propensities is constitutional or innately given." But there are extremely few tests for assessing the dispositions of individuals. One of the tests available is that by R. B. Cattell, reported in his book 'A Guide to Mental Testing." He calls the tests as the "Projection" Tests of Disposition. He has chosen six dispositions which he says are among the most powerful of the dispositions. They are the

i. Assertive Submissive Disposition.
ii. Acquisitive ,,
iii. Gregarious ,,
iv. Timid (cautious or bold) ,,
v. Curious ,,
vi. Dependent ,, (Plaintive instinct of appeal).

He has chosen the "Projection" technique for a number of reasons. Firstly people reading a story will project themselves into it. Secondly whenever "the motive attitude or disposition is such that a person might be expected to be aware that he possessed it,... he will tend to project it on to his admired characters. Thirdly wherever the motive, attitude or disposition is unconscious, because disreputable, the person with a large measure of it will tend to perceive it in the motives of people of whom he disapproves or in any deliberately hidden motive." Further on he states that it is necessary to avoid habitual responses and items where one could think and arrive at the motive by use of intelligence.

Hence with these points in view, he has devised a test consisting of 12 test items in each, except the Cautious or Bold disposition which consists of 14 items. A statement is made and three alternatives are provided. S is to underline *one* of the alternatives bearing in mind that he should choose that alternative which seems to him "the

most commonsense motive or reason" ; if a person, *e.g.*, John is described, assume that he is of the same age as yourself unless otherwise stated."

Here are a few sample items from the test.

Self-Assertion and Submission (Disposition)

Item (5) A man sometimes makes witty remarks in company because

he feels in a playful mood	0
thinks the company is dull	1
wants to show off	2

Acquisitive Disposition

Item (5) John liked playing banker with counters because he loved

the luck of the game	1
competing with others	0
feeling his board of counters getting bigger	2

Gregarious Disposition

Item (1) Solitude is good

for no body	2
as a punishment	1
for every body...	0

Cattell has allowed twelve seconds to read and underline each item ; but it was found too short, hence it was increased to fifteen seconds, partly because English is a foreign language for the people who took the test.

The test is scored by giving the items, points ranging from 0 to 2. Every question has a middle value 1. 0 would indicate the lack of the disposition, whereas 2 would show that it is present in a strong measure. The total score for each disposition is noted.

Minor changes were effected in the test to make it more suitable to our Indian Conditions.

In item (3) under Assertive-Submissive Disposition, the word "Admiral" was substituted by the word "Minister," because generally the students to whom the test was given do not come in contact with an admiral, whereas they come in contact with a "Minister."

The word Gothic Architecture, item (2) under Acquisition was substituted for "Mogul" architecture, because again we are more acquainted with the latter in India, than with the former.

The test was administered to 52 students of the B.A. and B.A. (Hons.) classes.

Table I gives the results in terms of step intervals ranging from 5 points to 21 points.

TABLE I

Showing the Scores on Cattell's Disposition Test

Name	Assertive	Acquisitive	Gregarious	Cautious or bold	Inquisitive	Depend	Remarks
1. T. A. R. ...	14	14	14	14	19	11	
2. M. G. S. ...	20	10	14	20	10	12	
3. H. V. L. ...	11	12	14	10	18	11	
4. G. N. S. ...	12	13	16	15	20	9	
5. B. S. ...	11	15	15	8	13	18	
6. S. D. ...	14	12	18	12	12	12	
7. N. S. ...	15	14	14	13	10	13	
8. T. K. P. ...	11	18	14	10	18	13	
9. R S. ...	12	13	17	5	12	11	
10. N. R. ...	9	10	12	13	13	14	
11. H. R. S. ...	15	14	14	17	16	10	
12. N. M. ...	9	9	11	15	16	10	
13. Y. S. S. ...	13	12	10	7	13	11	
14. S. I. ...	18	9	14	7	11	8	
15. C. B. G. ...	9	10	10	13	13	15	
16. T. H. V. ...	8	15	8	11	16	11	
17. M. P. ...	6	14	12	12	17	12	
18. H. S. C. ...	14	14	16	17	14	13	
19 M. B. P. ...	13	13	17	12	15	17	
20. T. K. R. ...	8	14	13	17	9	13	
21. C. V. R. ...	15	13	12	14	12	10	
22. B. R. ...	12	16	9	10	12	13	
23. N. M. ...	14	13	12	5	9	7	
24. V. S. V. ...	7	14	5	14	16	16	
25. S. R. ...	14	15	14	15	14	11	
26. H. R. K. ...	14	12	8	13	13	17	
27. N. S. ...	9	14	16	9	14	13	
28. P. S. P. ...	20	17	15	6	13	5	
29. K. M. S ...	12	15	12	11	18	16	
30. S. B. ...	9	11	15	14	12	14	
31. A. B. ...	18	11	15	14	14	15	
32. G. K. ...	17	12	14	9	17	11	
33. D. N. D. ...	17	14	14	9	9	11	
34. M. V. G. ...	13	11	12	12	16	13	
35. G. S. C. ...	15	16	10	18	16	15	
36. K. T. C. ...	13	10	15	14	13	12	
37. M. B. C. ...	7	15	11	14	14	11	
38. J. P. ...	16	8	11	12	13	12	
39. G S. S. ...	17	7	14	6	21	7	
40. N. V. S. ...	13	10	14	12	17	11	
41. T. K. K. ...	14	12	11	14	18	20	
42. C M. M. ...	11	14	13	12	11	9	
43. H. K. D. ...	7	13	19	9	18	10	
44. C. M. U. ...	12	10	13	11	15	14	
45 S. M. G. ...	14	16	16	9	21	7	
46. M. V. M. G. ...	12	12	17	11	18	17	
47. N. P. K. ...	16	10	17	12	18	7	
48. N. A. A ...	16	20	11	12	17	15	
49. P R R. ...	16	10	11	8	18	14	
50. C. S. S. ...	9	15	15	12	17	14	
51. G. N. ...	19	13	12	18	9	15	
52. K. S. V. ...	13	13	14	12	21	10	

Table II gives the median, the maximum and the minimum scores.

Assertive Submissive Dispositions

From Tables I and II, we find that the minimum score made by any body is 7, the highest being 20, the median score being 13.5. People who make a score below Q. 1, *i.e.*, 11.5 are 15 *i.e.*, 15. persons are submissive. The Q. 3 value is 15.5 and people who make a score above this are 13. The number of people who are average, *i.e.*, who are neither very submissive nor very assertive are thus 24 in number. Those who are extremely assertive (score between 19-20) are 3 and those who are extremely submissive are 5.

From the foregoing, it may be seen that even in this small group, the distribution of the submissive and self-assertive disposition seems to be about normal. The majority have a score between 11.5 and 15.5, just 2 points on either side of the median. Also the number of extremely assertive and extremely submissive people is about the same ; they are few in number.

Acquisitive Disposition

Taking the acquisitive disposition into consideration, we find that there are 28 people between the Q. 1 and Q. 3 values, *i.e.*, score 11 and 14. There are fewer in the extreme ranges, *i.e.*, 2 persons with scores between 7 and 8 and 3 persons with scores between 17 and 20. There is a greater centering around the median. The group is only moderately acquisitive.

Gregarious Disposition

There are 13 persons below the Q. 1 value, *viz.*, 11.5. There are 10 " above the Q. 3 " *viz.*, 15.5. Thus there are 29 whose score lies between Q. 1 and Q. 3 values, round about the median value of 13.5. The great majority, *i.e.*, 39 persons are either average or above the average in their gregarious disposition.

TABLE II.

Frequencies (N—52)

Score.	Assertion.	Acquisition.	Grega. rious.	Bold	Inquisi- tive.	Dependent (Appeal)
5–6	0	0	1	4	0	1
7–8	5	2	2	4	0	5
9–10	6	10	4	8	6	7
11–12	10	10	13	15	7	15
13–14	14	18	16	12	13	12
15–16	9	9	10	3	8	7
17–18	5	2	5	5	13	4
19–20	3	1	1	1	2	1
20–21	0	0	0	0	8	0

There are 13 persons below Q^1 value, *i.e.*, 9.5. They are the bold persons.

Cautious or bold

There are 9 persons above Q^3 value, *i.e.*, 13.5. They are the timid people.

Hence there are 30 people who are average, *i.e.*, neither too timid, nor too bold.

There are 13 persons below Q^1 value which is 12. They are weak in the disposition of curiosity. There are 18 persons above Q^3, *i.e.*, a score of 17. Thus there are 21 persons who are curious on the average. The average together with those who are highly curious number 39, *i.e.*, almost fourfifths of the total.

Inquisitive

The Median score, *viz.*, 15 is the highest median value for any disposition, showing thereby that the College Students are as a group strong in this disposition. The highest score 21 occurs in this disposition.

Median value is 11.5. There are 8 persons who are below Q^1 *i.e.*, 9.5. These are people who are not dependent.

Dependent Disposition

Above Q^3 there are 17 persons. These are people who are dependent.

Between these two values there are therefore 27 persons. There is a slight tendency for people to be dependent. They are all students, not yet independent of their parents.

The results can be examined from another point of view, *viz.*, the individual point of view. Cattell has stated that if we regard the instinct as drawing upon a common fund of libido, then, if one of the instincts has developed strongly, then there is an impoverishment of the remainder. Thus an assertive and irascible man would have less energy for curiosity, amorousness and sociability and *vice versa*." Cattell in a foot-note on page 174 of his book "A Guide to Mental Testing" states that "Statistical work suggests there are at least two group factors in "general emotionality." He states that "those who are prone to self-assertion being also more pugnacious and gregarious, whilst those who are timid are also more affectionate, submissive and protective."

We may now examine the results from this point of view and see how far the results conform to this notion of his.

Table No. III shows the scores of the group for the several dispositions. Only those cases are considered significantly high or low, whose score is above or below the 75-and the 25-percentile mark.

TABLE III

Showing the Maximum, Minimum, Median, etc.

Score.	Assertion.	Acquisition.	Gregarious.	Bold.	Inquisitive.	Dependent.
Average	13.1	12.6	13.2	11.9	14.2	12.2
Maximum	20	20	19	20	21	20
Minimum	7	7	5	5	9	5
Median	13.5	13	13.5	11.5	15	11.5
25%	11 5	11.0	11.5	9.5	12	9.5
75%	15.5	14.0	15.5	13.5	17	13.5

Maximum possible is 24, except for the cautious or Bold dispositions where it will be 28. The minimum possible is O.

There are two persons who are highly inquisitive and average in the rest of the dispositions; one person who is highly gregarious and average in the rest ; two who are highly timid and average in the rest. There are two persons who are low in acquisition and average in the rest; seven persons who are high in assertion and low in acquisition ; four persons who are low in both assertion and acquisition ; two who are high in both assertion and acquisition.

Cattell states that "Assertion" and gregariousness go together. Examining the scores in the two dispositions, it is found that there are five persons who are low both in assertion and gregariousness, one who stands high in both, eleven persons who are average in both. But, it is also found that there are 9 persons who are low in assertion, *i.e.*, who are submissive and who are gregarious only to an average extent, and 10 persons who stand high in assertion and average in gregariousness, 2 persons who are high in assertion and low in gregariousness, 9 persons who are average in assertion and high in gregariousness, 5 persons who are low in gregariousness and average in assertion.

We find that there are 17 persons out of 52, *i.e.*, 33%, who are high or low or average in both the dispositions. This means that there is no one to one correspondence between the two dispositions.

Examining his other statement that the submissive disposition and timid dispositions go together, we find the following results. There are 2 persons who are highly assertive and highly timid, 6 persons who are highly assertive and bold, 4 persons who are highly assertive and are timid or bold on the average ; 5 persons who possess

average assertion and highly timid, two persons who are low on assertion, *i.e.*, who are submissive and highly timid, 11 persons who are average on both the dispositions, 8 persons who are average on assertion, submission and timidity-boldness, 8 persons who are submissive and are timid on the average, 6 persons who are both submissive as well as timid.

TABLE IV

Showing the frequencies under the 25, the 50 and the 75 percentiles

Freq.	Q^1	Q^2	Q^3	Disposition.
1	15	24	13	Assertive-Submissive
2	15	25	12	Acquisitive
3	13	29	10	Gregarious
4	13	30	9	Cautious or Bold
5	13	21	18	Inquisitive
6	8	27	17	Dependent

We find here that there are 23 persons who are either highly assertive and bold or who are both assertive and bold to an average extent, or who are low both on assertion and boldness. Thus in this case there are 44% persons who show correspondence on both the dispositions which again is much below chance. There is no one-to-one correspondence between the two.

Examining the Table further, we find the following :—

There are people who are

Strong in	1	Disposition (S) and average in others
,,	2	,, ,, ,,
,,	3	,, ,, ,,
,,	1 & weak in 1, 2 or 3 dispositions	
,,	2	,, ,, ,,

From these results we can generally state that it is very rarely that a person is strong or weak in all the instincts. He is strong in one or two or three instincts and similarly weak in as many instincts.

But we have to note that there appears to be no reason for assuming that the strength or weakness of particular instincts goes with the strength or weakness of particular other instincts, at least so far as this group is concerned.

GENERAL CONCLUSIONS

1. The obtained median scores, *viz.*, 13.5, 13, 13.5, 11.5, 15, 11.5 come close to 12, the expected average. Only the median score for curiosity is more. It is 15.

2. This group of students is assertive, submissive, acquisitive, gregarious, cautious (bold) and dependent to an average extent.

3. The group as a whole is highly inquisitive. Minimum score 9, Miximum score 17, median 15 are all higher than the corresponding scores of other disposition. The same is confirmed by a glance at the frequency distribution. More people give higher scores than in the other dispositions.

REMARKS

Regarding the test items Cattell has remarked that he has not arbitrarily assigned the points to the three alternative items, but decided it on the basis of the results of a "group of 90 persons, who were divided into a high, middle as a low scoring group. Where there was a doubt as to the high scoring alternative, a decision was arrived at by referring to the choice made on that item by the high and low scorers on the test as a whole."

The present writer found that some of the test items are put down under dispositions that are inappropriate. They would fit better under other dispositions. Such items as need be changed are noted below.

Q. No. II. *Assertive-Submissive Disposition*

The good businessman is one who knows

	Points	Frequency
How to keep his assistants, in their proper place	(2)	45
with their noses to the grindstone	(1)	0
doing work they like.	(0)	7

It is seen that 45x people have underlined the first item, nobody has marked the second and only seven have marked the third alternative. The distribution is unequal and not what would be expected by laws of chance. This must be set right.

Q. No. 13. *Acquisitive Disposition*

One of the keenest pleasures of Childhood is in

		Frequency
i. fighting	(0)	14.
ii. Collecting things	(2)	29.
iii. Physical exercise	(1)	9.

The items are not proper under the heading "Acquisition." "Fighting" may be better fitted under "assertion" or pugnacity.

It is better that all the three items relate to the same disposition rather than to different ones as here.

Q. No. 15. John was quite a nice lad, but he would never allow any one to

			Frequency
i.	laugh at him	(0)	25_x
ii.	borrow his butterfly collection	(2)	2.
iii.	waste his time	(1)	25_x

The low frequency for the II item which is the crucial item and the high frequency for the first item shows that here again the three items are not gradations of one disposition. The first item will be more fitting under the assertive-submissive or the timid-bold disposition.

Q. No. 29. We live in a busy age, but most people want to spend at least one of their free evenings a week

			Frequency
i_x	at a cinema or dance	(2)	33_x
ii_x	at a lecture.	(1)	11_x
iii_x	with a book or making something	(0)	8_x

Cinema and dance are popular and it is a fashion to attend them. Hence this item attracts attention and weights over the other items as in shown by the frequency. Hence better to substitute it by some other less "spectacular" or less "fashionable" item.

Q. No. 71. *Dependent or Plaintive Disposition*

The child who brings his complaints to the teacher is really more sensible than one who

			Frequency
i.	defends his rights with his fists	(2)	35_x
ii.	cries to himself.	(0)	13_x
iii.	gives in quietly to bullies.	(1)	4_x

The distribution of the responses would show that the group is highly "independent", whereas it is only normally so, as can be seen from the group frequencies—(table IV). Perhaps another more suitable item should be put in its place.

Q. No. 74. The part of the play which affected John most uncomfortably was, where a young man was

			Frequency
i.	drowning miles from shore	(1)	12.
ii.	fighting against odds.	(2)	15_x
iii.	stealing his father's money.	(0)	25_x

This distribution again shows the majority marking in an opposite way to Q. No. 71 above. This item *viz.*, stealing his father's money may really refer to one's acquisitive disposition rather than to the plaintive disposition. Hence it needs to be substituted.

Other items that need suitable substitution would be item No. 2 in Q. No. 17 where the idea of competition is introduced while testing the acquisitive disposition.

Similarly item No. 2 in Q. No. 56 under curiosity, which refers to a room where apples were stored. This may refer either to the acquisitive or the food instinct.

TABLE V

Showing the Scores on Intelligence Test and the Dispositions (Curiosity) Test

Name	Intelligent Test score	Inquisitive Test score	Name	Intelligent Test score	Inquisitive Test score
T.A.R.	61	19	T.K.R.	84	9
N.A.A.	66	17	S.R.	96	14
A.B.	78	14	B.R.	41	12
S.B.	73	12	K.M.S.	66	18
G.S.C.	47	16	N.S.	71	10
H.S.C.	62	14	P.S.P.	63	13
K.T.C.	54	13	C.S.S.	106	17
M.B.C.	86	14	V.S.V.	119	16
H.K.D.	73	18	C.M.M.	97	11
D.N.O.	60	9	T.S.K.	92	18
K.G.	80	17	G.S.S.	80	21
M.U.M.	101	16	N.V.S.	85	17
H.R.K.	64	13	N.S.	64	14
N.P.K.	95	18	C.B.S.	50	13
C.M.U.	97	15	K.S.V.	73	21
M.V.M.G.	55	18	N.M.	46	9
N.M.	70	16	H.Y.L.	81	10
M.B.P.	51	15	T.H.V.	78	16
C.V.R.	30	12			

The point of this argument is simply this that while testing one disposition, items relating to other dispositions should not be brought in, because that brings about complications.

PART II

Relation between Intelligence and the Disposition of Curiosity

It is pertinent to ask how far intelligence is related to the disposition of curiosity. Are those in whom curiosity is strong also very intelligent? Are those who are not very intelligent less curious?

In order to find this out, a composite test of intelligence, used in the Psychology Laboratory at the Maharaja's College, Mysore, was administered to 37 students. The test consists of six subtests *viz.*, the Opposites, the Analogies, the Mixed Sentences, the Silent Reading, the Cipher and the No. Completion tests. Credits on all these were totalled up. The same students were given Cattell's disposition test and the scores made by them on the test for the disposition of curiosity were taken.

Correlation calculated on the basis of ranks between Intelligence test scores and the scores in the test on the disposition of curiosity is found to be

$$R = 0.1893 \text{ and } r = 0.307 \pm .0971.$$

There is a positive correlation in the expected direction, but it is low.

Probably the technique of testing curiosity requires modification and precision.

THE PSYCHOLOGICAL SYSTEM OF SRI AUROBINDO

INDRA SEN (*Pondichery*)

The rise of psychology in recent times can truly be called a phenomenon. In the 16th century Francis Bacon had powerfully appealed to the European scholars to explore nature and build up power. And they responded admirably and created within about three centuries a remarkable state of civilisation. The mastery that it gave to man over the natural forces of land, sea and air was astounding. But an altogether objective attitude, an attitude all directed to the study of the facts of external nature, involved a neglect of the human subject. The result was two-fold. There was a lack of interest and knowledge regarding human personality and its conditions of existence and therefore lack of control and conscious direction of its energies. And then paradoxically enough—inspite of the scientific conquests of the environment—there was a cultural maladjustment with the situation and hence neuroses of certain kinds.

The interest grew in man and his personalistic difficulties and psychology tended to become a living and an influential science. Freud, Jung and Adler became leaders of a great cultural movement, which sought to draw the attention of man from the external fact to himself. And within a course of a few decades a large body of psychological knowledge grew up. The standpoint of these three luminaries of psychology was marked by a depth and intensity in the study of personality, which did not exist in the science before. Wundt had founded experiment in psychology, but his new method was mostly confined to the study of sensations. Kulpe had extended it to Thought processes and Ebbinghaus to Memory and it was a good advance. Yet the dominant outlook of the science was governed by the theory of associationism, which holds sensations as the primary data and explains memory, thinking, imagination, and even voluntary action as the result of different forms of associations amongst them. J. S. Mill in England and Condillac in France were the chief representatives of this way of thinking and they set the standard for the rest and for a long time.

The various contemporary schools of psychology, Psycho-analysis, Purposivism, Gestaltism, Behaviourism and their sub-schools, arose

in reaction to associationism and its intellectualism and atomism. All contemporary schools, how so divergent in their positions they may be, hold activity as more primary than sensations and ideas ; and insist on the unitary character of personality. All this is very good.

But the sum of our psychological knowledge is confined to the conscious mental processes of sensations, ideas, memory, imagination, thinking, etc., and the subconscious, which is more or less the reservoir of our past experiences. These experiences are, however, dynamic facts, which by their own force tend to rise to the surface of consciousness and otherwise influence our thought and action. The exploration and the identification of the contents of the subconscious and their working will stand as a feat of scientific achievement to the lasting credit of Freud's Psycho-analysis. Jung, through his conception of the Racial Unconscious, has gone deeper and it is a further achievement of contemporary psychology.

The idea of evolution, since Darwin has very rightly been a necessary idea of all knowledge in West and some of the important psychologists make a large use of it to explain mind and behaviour. But, even when it is made use of, man is conceived as a product of the antecedent evolutionary conditions. This can be said to be all right, since the two principal drives of Darwinian evolution, the struggle for existence and the survival of the fittest, are mechanistic forces. But even a purposive and a teleological evolution, which has gained a large ground in recent times, remains committed to mechanical causation and does not undertake to explore the ends and goals of evolution and their working.

This works in particular in psychology, where mind is definitely recognised as teleological in its activities, most adversely. The category of end remains mostly a name and the entire field of consciousness and behaviour is sought to be explained in terms of the antecedents of instincts and habits.

This is just the general framework of contemporary psychology, its over-all situation. We will now try to do the same in regard to the psychological system of Sri Aurobindo and see in what measure it can make a contribution to the fund of our contemporary psychological knowledge.

Sri Aurobindo has not propounded a psychological system, as a separate body of knowledge, but his writings on yoga and philosophy, in particular The Life Divine and the Synthesis of yoga, do contain one. We have there a complete view of mind and personality, which has a standpoint of its own, a methodology adapted to its

standpoint and a considerable body of knowledge. And all this is entirely psychological, since its emphasis is always on experience and not on any *a priori* reasoning.* We will now consider some of the salient features of it, its essential framework and its general situation.

The first and the most important characteristic of the psychological system of Sri Aurobindo is its empirical standpoint. It rejects all *a priori* assertions about personality. Considering the general character of the system, one would feel inclined to call it a system of rational psychology like those of Spinoza, Leibniz, Wolff and Kant. But in fact it is not, because it insists on experience, though with the Western empiricists it does not agree to remaining confined to the experience of perception and its ideational elaborations and the phenomena that these pertain to. It seeks to widen the scope of experience and seeks in particular new qualities of experience. The idea of evolution is even more strongly an element in this standpoint. But the evolution here contemplated is purposive and teleological, while it has no objection to accepting Darwin's principles of 'the struggle for existence' and 'the survival of the fittest' as mechanical factors determining the process at a stage (the purely animal), but which as a whole moves forward to achieve certain purposes and goals. However, as evolution advances and consciousness grows stronger the process tends to become larger and richer, as in man. Perceptual consciousness of the animal, which is all too fragmentary, limited to the given bit of space and time, tends to become a larger unity at the ideational and the thinking level of man. Here the larger unities of space and time can be comprehended and a more unified personality comes into being. All the same the personality is yet a loose sort of organisation of its propensities and reactions to the environment, which at the perceptual level were more or less individual sorts responses of the organism. A self-conscious integration of them is yet another stage, which so far some *individuals* alone have represented in action, but that surely means a clear possibility for man in general. This process of self-conscious integration of personality involves a progressive clarification of what is objective and what is subjective in experience so that the whole body of objective

* *Cf.* "The whole method of yoga is psychological; it might almost be termed the consummate practice of a perfect psychological knowledge." (Arya, Vol, IV, p. 274) Even regarding fundamental philosophical problems his approach is psychological. Says he. "only by an extension of the field of cur consciousness or an unhoped for increase in our instruments of knowledge can the ancient quarrel be decided." The Life Divine, 1939, Vol. 2, p. 31.

experience, practical, scientific, artistic, philosophical, and religious, and the various feelings and impulses connected with them, come to be self-consciously discriminated and organised around the true subject of these sensations, ideas, feelings and impulses. This would lead to a fuller integration of personality and it intimately belongs to the standpoint of Sri Aurobindo's psychology that the approach to experience should be of such progressive growth.

The incorporation of the idea of evolution into the standpoind of psychology would thus tend to make it, from the point of view of Western knowledge, practical, whereas scientific psychology is simply to observe, classify and attempt to explain facts. The issue of theoretical and practical standpoints receives, a most interesting kind of synthesis in Sri Aurobindo's psychology. Sri Aurobindo is not content to take human personality as an integer, a whole fact by itself, and then try to analyse and explain it. It belongs to a process of Cosmic evolution and he insists that it must be taken as such. Its past, which has led on to its present form, must be considered, but more so must its future possibilities be considered, which are evidently the dynamic influences determining its growth at the present moment. These influences Sri Aurobindo takes enormous pains to detect in the present structure of human personality and stresses the need of recognising them as a means for the growth of experience, which the science of psychology has to study. This standpoint is theoretical, since it aims at truth for its own sake. But the full truth of personality requires the student to grow up as a part of the method of study. Sri Aurobindo would argue that if we insist on taking our stand on perceptual experience we will not be able to appreciate the ideational and intellectual level of experience and similarly if we take the intellectual as our final stand then we will fail to comprehend the supra-intellectual levels of experience. We must personally persist in ascending and then alone could we hope to reach wider and wider in the growing fields of personality. Thus the practical emphasis in Sri Aurobindo's psychology is thoroughly consistent with the theoretical aim of science. We have simply to remember that here the subject-matter of study is a process, which has a past and a future to it and therefore we cannot treat it as though it were a finished product. And in unravelling the future more fully than it is indicated now we have naturally to grow ourselves to have that experience.

The standpoint of Sri Aurobindo's psychology is thus empirical, evolutional and one involving personal growth. The last characteristic is important, since in psychology human personality, which is the

object of study, is also the studying scientist, whose faculties of observation must grow *pari passu* with the widening of experience.

The methodology of psychology rightly prizes Introspection as its primary method, as it alone gives an immediate knowledge of the psychological data, the experience. The other methods of objective observation of behaviour and experiment and the various forms of these rest upon introspective experience, without which they could not be operative. But introspection, as so far developed and used in psychology, is limited to the observation of certain sensory, perceptual and ideational experiences, as they play up at the surface of consciousness. The Free Association of Freud, which can be regarded as a kind of introspective report is, undoubtedly, a most interesting development and extension of it. In this form introspection becomes an observation of the deeper content of the subconscious.

Now Sri Aurobindo would demand of introspection to become an instrument of self-observation of such a form and quality that the individual is able fully to stand back as it were from himself and observe himself with complete detachment. This would involve at first a progressive self-detachment and self-discovery to such an extent that the individual attains to an identification with the inmost subject of experience within himself and the best possible detachment from what he calls his body and property, ideas and opinions, emotions and sentiments.

The mastery of such introspection is a hard discipline, but even a good appreciation of its nature and character would put the observer on guard against his non-subject-identifications and thus enable him to eliminate them more and more, The moralistic and religious bias of 'oughts' and 'ought-nots' is one of the serious hurdles, since until a thoroughly objective and realistic attitude becomes well-ingrained there is always the danger of being carried away by such persuasions in our observations of experiences. This introspection, when sufficiently developed would be competent not merely to observe what plays up on the surface of consciousness directly, but also what is in the subconscious and is exercising its influence on the conscious content and also the pull and the force of the dynamic goals of evolution on the present personality. This becomes possible to it in the measure the individual attains to the proper subject-identification and detachment from the objective equipment of personality.

Such introspection is the main method of Sri Aurobindo's psychology and when this is developed the objective observation too

receives proportionate extension and depth in its study of other personalities. Experiment, as the principle of observation under predetermined and controlled conditions, admits of an application to both of the above methods, as is ordinarily possible, with of course some necessary modifications.

We can now go on to consider some of the other salient features of this system of psychology. Before Freud, conscious experience was practically the whole of the data of psychology. Today we recognise that it is only about one-tenth of our mental life, whereas the nine-tenth of it is subconscious. Jung's racial unconscious is a further extension of the same. Sri Aurobindo finds that the unconscious virtually goes much farther so as to include our material body too. The intimate relation of matter and consciousness in our life as well as the progressive evolution of consciousness from the beginnings of life to man shows that the two are not contradictories, as is believed, but that they constitute in essence a continuity. Thus there can be no unbridgeable gulf between body and mind for psychology and further if the progressive growth of consciousness in evolution is any indication of the future, then the final object of evolution must be the achievement of the fullest consciousness and therefore a complete disposal of the unconsciousness. But in his conception of the Superconscious he adds an altogether new dimension to human personality. If the evolution is a fact then the future possibilities must be present in the organism as definite present potentialities. The animal, for example, does possess the rudiments of rationality of man, which we must say is a definite possibility of animal life. Similarly, in man his possiblities must be admitted as potentialities which may become actualities tomorrow. Knowledge, feeling and will of an integrated personality are not normal to man today. But they are surely indicated in him and can be regarded as evolutional possibilities. These do not belong to our past experience and cannot, therefore, be called a content of the subconscious. They have evidently to be regarded as another aspect of personality and this Sri Aurobindo calls the Superconscious.*

* *Cf.* "We find when we go within, that somewhere in our subliminal part, though not co-extensive with it since it has also obscure and ignorant regions,—there is a consciousness much wider, more luminous, more in possession of itself and things than that which wakes upon our surface and is the percipient of our daily hours; that is, our inner being, and it is this which we must regard as our subliminal self and set apart the subconscient as an inferior, a lowest occult province of our nature. In the same way there is a superconscient part of our total existence in which there is what we discover to be our highest self, and this too we can set apart as a higher occult province of our nature." *he Life Divine*, 1940, Vol. II. Part I. p. 401

For the growth of personality the Superconscious is evidently the most important part of it and it is to this that Sri Aurobindo has devoted by far the largest measure of his energies. He has explored it, marked out its several successive ranges, characterised them and shown the relative influence of each on the normal mentality of man. This constitutes the most valuable part of the detailed working out of the psychological system of Sri Aurobindo.

It may be recalled in this connection that Freud had explored the Unconscious, formulated the laws of its working, brought out the fact of repression and practically shown how a subnormal personality could be brought to the level of normality. Sri Aurobindo's call was to the Superconscious, because he was primarily interested in the further growth of human consciousness. He then addressed himself to the realm of the Superconscious and has characterised the principal contents of it and evolved a technique by which a self-conscious acceleration of growth is made possible.

Jung in his otherwise most remarkable book *The Integration of the Personality* affirms that the so-called superconscious of the yoga is no distinct fact from the subconscious. (Vide *The Integration of the Personality*, p. 26.) He explains that the yogi by a special discipline tries to universalise his consciousness, but in doing so the consciousness becomes dim and ultimately identical with the unconscious. This is, however, contrary to actual experience. By yoga one progressively achieves freedom from the mind's fixations to the particular appearances of things and thus an indefinite extension is realised. But it is a highly conscious and luminous experience which is of great significance to the life as a whole. However, there are certain paths of yoga, which are in fact aberrations of the true yogic discipline, which seek release from the ordinary life into the unconscious.

In his reasoning identifying the superconscious with the subconscious Jung in fact gets involved in a self-contradiction. He

Again "We might say that there are three elements in the totality of our being: there is the submental and the subconscient which appears to us as if it were inconscient, comprising the material basis and a good part of our life and body there is the subliminal, which comprises the inner being, taken in its entirety of inner mind, inner life, inner physical with the soul or psychic entity supporting them; there is this waking consciousness which the subliminal and the subconscient throw up on the surface, a wave of their secret surge. But even this is not an adequate account of what we are; for there is not only something deep within behind our normal self-awareness, but something also high above it: that too is ourselves, other than our surface mental personality, but not outside our true self; that too is a country of our spirit."—(*Ibid.*, pp. 405-6).

rightly recognises the yogi as a "past master" in the art of whole living and this wholeness evidently comes to him through the new consciousness of yoga, the superconscious. The unconscious is to him as to Freud "chaotic" in character. Now how could two fields of consciousness, one chaotic and the other whole, be identified?

Besides the superconscious the subliminal is another new sphere of consciousness identified by Sri Aurobindo. The individual is surely a particular representation of the species. It possesses the general characteristics of the species in an individual formation. Now the subliminal self or the subliminal sphere of personality, is exactly the meeting ground of the individual and the universal. In that the individual participates in the universal and is thereby able to exercise functions like telepathy, tele-audition and others, which involve a wider action than those of the normal personality. We cannot afford to dwell on it longer, but the subliminal is an important realm of personality, which can explain more satisfactorily than so far achieved the varied phenomena of para-psychology.

Another important salient feature of Sri Aurobindo's system of psychology is the idea of levels or planes of consciousness. Two levels of experience are a patent fact of common psychology, the perceptual and the ideational. Sri Aurobindo, the explorer of the superconscious, unravels a number of others coming after them in an ascending order. Of these the first he calls the *plane of psychic experience*. Our normal personality is, as the etymology of the term says, truly a mask. It is a superficial organisation of our being meant for dealing with the external situation. This he calls the "surface personality" and it is the sum-total of all the perceptual-instinctive reactions of the organism and the mental elaborations of thought and sentiment. The psycho-biological life as a whole is such a formation. In this connection it is easy to recall Bergson's view of mind. We know he regards mind as an instrument concerned with external reality and which creates lines, forms, figures and all the fixed positions of the external world so that the organism may be able to act on it and achieve the practical ends of life. The real fact of personality is to him a deeper flow, *an élan vital*, which we are able to contact when we dissociate ourselves from the superficial formations of the states of consciousness.

To Sri Aurobindo too, the mind is an instrument of organisation and action and is all concerned with the external situation. But it is to him a transitional term of evolution and a secondary phenomena, since it is in the psychic experience that consciousness comes

into its own, which is, therefore, the primary fact. It is by an introspective penetration, a going within, that we land upon this plane of experience, which is characterised by markedly different qualities. This experience is, at the first instance, a whole consciousness, an integral fact, and therefore free from the stresses and strains of the mental willing, which is always counteracted by some contrary willing, conscious or subconscious. It is marked by a greater clarity and a clearer and a surer joy. This experience is a whole in its nature and exercises a harmonising function with regard to the rest of the personality.*

This plane of experience is an *élan* in the words of Bergson. It is a movement, it is a flow. Sri Aurobindo chooses to call it a flame, which tends to rise higher and higher. But if we call it an *élan* we will have to call it an *élan conscient,* since it is essentially consciousness in urge or movement.

Ordinarily our identifications are all with the formations and habits of our mind and body, the acquired reactions of the organism

"Mind, though it imposes a certain, a considerable mentalised harmony, cannot integrate the whole being and nature. These harmonisations by an inferior control are, besides inconclusive, because it is one part of the nature which dominates and fulfils itself while the others are coerced and denied their fullness. They can be steps on the way, but not final; therefore in most men there is no such sole dominance and effected partial harmony, but only a predominance and for the rest an unstable equilibrium of a personality half formed, half in formation, sometimes a dis-equilibrium or unbalance due to the lack of a central government or the disturbance of a formerly achieved partial poise. All must be transitional until a first, though not a final, true harmonisation is achieved by finding our real centre" which is described as "a constitutional ruler who allows his ministers to rule for him." ..... "It is by the coming forward of this true monarch and his taking up of the reins of government that there can take place a real harmonisation of our being and our life," (The Life Divine, 1940, II (2), pp. 925-26).

Again *Cf.* "The psychic part within is there to support the natural evolution, and the first natural evolution must be the development of body, life and mind, successively, and these must act each in its own kind or together in their ill-assorted partnership in order to grow and have experience and evolve. The soul gathers the essence of all our mental, vital and bodily experience and assimilates it for the farther evolution of our existence in Nature; but this action is occult and not obtruded on the surface. In the early material and vital stages of the evolution of being there is indeed no consciousness of soul; there are psychic activities, but the instrumentation, the form of these activities are vital and physical—or mental when the mind is active. For even the mind, so long as it is primitive or is developed but still too external, does not recognise their deeper character. It is easy to regard ourselves as physical beings or beings of life or mental beings using life and body and to ignore the existence of the soul altogether: for the only definite idea that we have of the soul is of something that survives the death of our bodies; but what this is we do not know because, even if we are conscious sometimes of its presence, we are not normally conscious of its distinct reality nor do we feel clearly its direct action in our nature." *Ibid*, pp. 913-14.

and we, therefore, remain limited to them in the use of the resources of our personality. But the psychic experience does even normally, at times, emerge in our ordinary consciousness or we do sometimes spontaneously get on there. Even, so far as the common perceptual and ideational levels are concerned, we do move up and down, sometimes living at the plain of sense-experience and sometimes at the heights of moral, aesthetic and intellectual experience and at other times at so many other intermediate positions between them. If we could recognise when the psychic experience comes up and then feel its quality and efficacy for integrating the rest of personality, then a distinct psychological action would be set up in us, an aspiration would arise, which would seek to bring the psychic to the front and make it lead the personality. That would be the happiest situation for the growth in integration.

The psychic experience is the first of the superconscious facts of our mentality. The subsequent ones are, as Sri Aurobindo clearly characterises them, even more powerful. But we will not undertake a discussion of them here.

In connection with the fact of the psychic experience, Jung, the profoundest of the Western psychologists, provides an interesting parallel. We have already referred to his book "The Integration of the Personality". It pronounces an interesting judgment on the present stock of our psychological knowledge. Says he, "All the usual little remedies and medicaments of psychology fall somewhat short (to explain personality) just as they do with the man of genius or the creative human being. Derivation from ancestral heredity or from the milieu does not quite succeed; inventing fictions about childhood, which is so popular today, end—to put it mildly—in the inappropriate; the explanation from necessity—"he had no money, was ill", and so forth—remains caught in mere externalities."[1] Finding all the available explanations of personality unsatisfactory, he persists in his own search for one and at last declares that there is "a psychic centre of personality that is not identical with the 'I' ". He thus affirms a 'centre' different from the ego. And he ascribes to it a dynamic influence. Says he, the centre of personality "acts like a magnet upon the disparate materials and processes of the unconscious and like a crystal grating, catches them one by one".[2] It thus has an integrating and a harmonising function.

[1] "The Integration of the Personality" (Jung), p. 299.

[2] "The Integration of the Personality", Jung, p. 197.

The similarity between the plane of psychic experience of Sri Aurobindo and the 'centre' of Jung is most interesting. Even their functions are broadly the same. However, for Jung it is a hypothesis, whereas for Sri Aurobindo it is a fact of direct experience, which he characterises in fullest detail and even gives the method and the technique of bringing it more and more into the front and direct play upon the rest of the personality, so that personality as a whole ascends in its evolutional progression.

The discovery of this new fact of experience whole and integral in character, would obviously be of the deepest consequence for the science of psychology. Evidently a full appreciation of it will lead to a reconstruction of psychology, since all our present explanations visualise the mind and its action-reaction polarities as final. In view of the wholeness of the psychic experience these polarities would naturally acquire a different meaning. Self and not-self is the most basic polarity of our psychological existence, as our self lives, moves and has its being in a constant relation with a not-self. Our mind depends upon and is correlated with the environment. But the psychic experience is an integer, a wholeness. It does not depend upon the environment, nor is it necessarily bound to it. However it can act on it, but that it does as an independent whole fact. In the same way it will give a new orientation to the other so-called essential concepts of mind.

The psychic experience also sets up a new standard of mental health. Mental health is today an "on the whole economic balance" among the stresses and strains of the various parts in 'the anatomy of personality' *i.e.* the superego, the ego and the Id. It is not a state of complete inner harmony, which is revealed in the wholeness of the psychic experience and promised by its integrating and transforming action.

The limited space of this paper does not permit us to proceed on to show how the standpoint of this psychological system and in particular the psychic experience will affect some of the other important issues of common psychology. But it is evident that it will, since we have now a qualitatively new fact present in the picture.

We had started in an ambitious way. We had announced a psychological system in the title of our paper. But we have barely given a few of the salient features of it. We hope they do make out that we have here a new system, another orientation of personality, which can suggest new lines of research and make a definite contribution to our knowledge of personality.

FUNDAMENTALS OF FEELINGS AND EMOTIONS IN INDIAN PSYCHOLOGY

A. Bagchi (*Jalpaiguri*)

All knowledge and all arts in ancient India were wedded to religious cults. Indian sciences did not evolve as pure treatises of science. Astronomy, Geometry, Arithmetic, etc., for example, of ancient India were practical accessories to the Vedic cult of Yajña-sacrifice. Indian astronomy was to determine dates and times of the sacrifices, Geometry to devise the figures of altars, and so on. So were other sciences. Even those sciences which had no occasion to grow directly to meet some needs of the religious cult were somehow or other connected with religion or ethics. Āyurveda or medical science of India is an instance. Indian science was not to be for its own sake. Sciences were called Śāstras, and there were none in India to be specially called Manaḥśāstra—science of the mind, Psychology.

Knowledge and realisation of the ultimate reality were the basic ideals of the religious cults of ancient India. The highest sciences of India were all dealing with the ultimate reality and its realisation by man. Discourses on ultimate reality naturally reflect on subjects otherwise belonging to the physical sciences. So, do discourses on human realisation of the ultimate reality reflect on subjects otherwise belonging to the sciences of Biology and Psychology. Psychology in ancient India was thus treated not as a separate autonomous science but evolved to satisfy the incidental requirements of a metaphysical treatise.

But for this lack of individual autonomous, as such systematic, treatment of Indian science in general, some notable characteristics otherwise accrued to Indian Psychology in particular. Indian Psychology was basically interlinked with Physics. The link obtained in both mind and matter having had to be pegged on the same ultimate reality. Physics and Psychology of ancient India played the heroine and the hero in the same drama of the ultimate reality. Speculations on mind were carried on in terms on which were based speculations on matter as well. The spirit of the mind was the spirit of matter alike.

Mental activities were studied in such a way that forces behind them would be seen allied to, and of one category with, the forces

behind the phenomena of the physical nature. Indian Psychology is specially interesting because it studies mind in unison with the so-called physical energies of nature. According to Indian Philosophy, mind is an unspiritual entity homogeneous with matter. In this trend of Indian Psychology the student of modern Psychology will find distinct echoes of his own studies and will be astounded to come by the most apt solutions of the very many problems of modern Psychology itself—problems relating to the relations of the mind with the physical nature.

Alluring as it may be in this respect, in respect of the general standpoint, Indian Psychology, however, lacks its attractions for the modern students on account of another very remarkable feature of it. It is the method of treatment. Indian sciences, for reasons of their own, were rather non-experimental in their approach. Most peculiar to ancient culture and civilisation, with religion the motive and realisation of ultimate reality the pursuit all through, the Vedas were regarded as the embodiment of ultimate reality. The whole range of ancient Indian culture was dominated by this assumption, one of the multiferious corollaries of which was the doctrine of 'Ṛṣi' or the seer. The 'Ṛṣi' was the superman in whom the Vedas, and for the matter of that, all knowledges revealed of themselves. To be short, in the intellectual field each and every side of India had some 'Ṛṣi' as its 'Upadeṣṭā' or first preacher, founder. Because, on the one hand, the 'Ṛṣi' alone was to be in the fullest knowledge of the ultimate reality, and, on the other hand, all knowledges were but derivations of the knowledge of the ultimate reality. The 'Ṛṣi' again, to come to the point of our discussion, to put up a divine show of his knowledge, told things as 'Āpta-Vākyas' authoritative statements to be accepted at once as true because *he* told them. Indian sciences, everywhere in every branch, were burdened with certain un-impeachable presumptions—the 'Āpta-Vākyas' of the 'Upadeṣṭā'. Obviously, the student of modern science cannot accept such a position. To him who has nothing to do with the authority of the Vedas the generalisation by itself is not important. It will come out inevitably out of the premises. The premises or the objective data are the foremost concern, they are his only authority and proof. Modern Psychology is Experimental Psychology. Indian Psychology, on the other hand, was essentially non-experimental.

Of what use, then, is the study of Indian Psychology to the modern student?

If Indian Psychology abounds in mere generalisations established

on faith rather than on experiments, too much scepticism, on the other hand, is detrimental to the formation of hypothesis, and without the hypothesis to guide, experiment is prone to create the perplexing wilderness of unco-ordinated bizarre of facts equally useless for scientific pursuits. This is especially true in the case of the science dealing with consciousness which is after all unsuited to objective enquiry in the last resort. Hence be it said for the Indian Psychology—let Indian Psychology equip the modern student with provisional hypotheses in the generalisations it announces, and let him proceed to establish them as valid scientific truths by putting them to his own modern experimental method of study. Let the ancient Indian Psychology and the modern Experimental Psychology complement and benefit each other. And love's labour will not be lost. A convincing evidence is Āyurveda—the medical science of India, of which the scientific basis has not yet been fully explored yet of which the experimental application brings results with no less success. It is well known, the late J. C. Bose only substantated the hypothesis inspired in him by the remark in Manusaṃhitā—**अन्तः-संज्ञा भवन्त्येते सुख-दुःख-समन्विताः**—these (plants) are organism with inner consciousness alone (*i.e.*, without the outer elaboration which more developed sense-organs can give) and are thus endowed with (the capacity for experiencing) pleasure and pain alone. Indian sciences may be said to be in a sense deductive in nature, in distinction from the modern sciences which may be said to be in a sense inductive in nature. The reference to the highest truth, the ultimate reality, always dominated Indian sciences. They were always treated as dealing with subjects deduced from the ultimate reality. The ultimate reality being always accepted and placed at the beginning, Indian sciences could be consistent in the studies of their individual subjects only by way of deducing the facts of the latter from the self-evident postulate of the start. Modern sciences, on the other hand, believe in the objective facts alone as what can be basically assumed. Their way is to start with them and then reach the generalisation inductively. By dint of the essential deductive habit Indian Psychology started outright with a clear-set conception of the mind and then, with reference to it would proceed to explain the Psychophysical manifestations of the mind—the objective mental facts. Modern Experimental Psychology, on the other hand, would start with the Psychological manifestations at first, and would proceed to discern inductively the nature of the structure and functions of the mind.

Keeping in view the above characteristics of Indian sciences

in general and Indian Psychology in particular, we should expect our present enquiry into feelings and emotions in Indian Psychology to proceed in recognition of the following facts:—

The treatment of the subject in Indian literature should be sought only as casual references, the context of treatises mainly devoted to discourses on religion and ethics. As matters would have it all the religious cults of ancient India emphasised in various respective ways the importance of feelings and emotions in the matter of spiritiual theories and practices—some (*e.g.*, Vedānta etc.) advocating freedom from passions and attachments, others (*e.g.*, Vāiṣṇavism, Tantra) advocating particular sublimation or use of them. By virtue of the ultimate one Vedic source a common tradition of common concepts they all drew upon. And as matters would have it, the Sāṃkhya-philosophy happens to delineate the common tradition not only with regard to feelings and emotions but Psychology in general rather in a full-fledged and systematic form. The importance of Sāṃkhya-philosophy is at once felt in any enquiry into psychological speculations of ancient India. Sāṃkhya is the starting point of Indian Psychology. So far as Psychology is concerned, other Indian schools might be regarded as derivations or deviations from Sāṃkhya. All schools of thought in ancient India constantly refer to Sāṃkhya whenever a psychological concept is in question. Kapila, the first preacher of Sāṃkhya, was practically the preacher of Indian Psychology.

There is another domain of Indian literature, Āyurveda, the medical science, where in the context of mental diseases and symptoms psychological studies have naturally crept in along with their further physiological connections. Yet it is an interesting fact that Āyurveda or the Indian medical science deduces all its studies freely from Sāṃkhya concepts of life and nature. The study of mental diseases and symptoms in the Indian medical science is often in terms of various feelings and emotions.

Then there is the Kāma Śāstra or the sex-science of ancient India. Herein too, where the conduct of sex and sex in love has been created in astoundingly exhaustive details, basic psychological concepts have been drawn from Sāṃkhya.

It must be remembered that in all the above spheres of Indian literature, even in Sāṃkhya-philosophy, pyschological speculations in general, on feelings and emotions in particular, occur not as the predominant subject-matter but as the incidental topic. Fortunately, however, in that branch of Indian literature, called Alaṃkāra-śāstra, science of aesthetics, feelings and emotions happen to be treated as

an individual topic by themselves. Indian aestheticians adopted the concept of 'Rasa' feeling fully expressed as the pivot of all their aesthetic speculations. In no other branch of ancient Indian literature feelings and emotions get so much chance of individual treatment. The treatment of feelings and emotions is predominant and complete in Indian aesthetics. As a matter of fact, what Sāṃkhya was to psychology in general, Alāṃkāra was to the topic of feelings and emotions in particular, in ancient India. So far as feelings and emotions are concerned ancient Indian speculations took definite, comprehensive and complete form in the domain of aesthetics. Bharata was the first preacher of Indian aesthetics, his work being called Nāṭya-śāstra. Preacher of aesthetics, Bharata practically happens to be the preacher of feelings and emotions in particular. The seventh chapter of Nāṭya-śāstra is veritably an autonomous discourse on feelings and emotions. Bharata introduces the seventh chapter, with the words, भावादिदानीं वक्ष्यामः—"I shall now narrate the feelings." For enquiry into the subject of feelings and emotions in Indian psychology, Indian aesthetics is the best ground to cultivate and Bharata's Nāṭya-śāstra is the original and authentic lair to plough. The latest researches on the external details of the subject, however, may be taken from the late aesthetic work, Bhāvaprakāśa of Sāradātanaya.

Feeling is after all, as the Indian philosopher calls it, चित्तवृत्तिविशेषः—a particular kind of mental function. In order to have a comprehensive understanding of the nature of feeling one must know that it derived from the mental being as a whole. A study in feeling is indeed a part of psychology. Aesthetics furnished no doubt the apt ground for the individual and abstracted study of feeling in ancient India, but a fuller study of the subject demands that the abstraction should at last be dissolved in the general psychological concepts. As stated before, for the general psychological concepts of ancient India, Sāṃkhya is the source. Our task would then be to graft our study of Nāṭya-śāstra upon Sāṃkhya. In that task, again, we get the remarkable help, from Abhinavabhārata, the novel guide to Bharata, a commentary on Nāṭya-sāstra by Abhinava-gupta, the master aesthetician-philosopher of ancient India.

FUNDAMENTALS OF FEELINGS AND EMOTIONS IN INDIAN PSYCHOLOGY

AMALENDU BAGCHI (*Jalpaiguri*)

MIND AND FEELING

Bhāva is the Sanskrit equivalent of feeling. When Bharata proposes, भावानिदानीं वक्ष्यामः, I shall now narrate the bhāvas (Nāṭya-Śāstra VII), what he actually narrates are the so called feelings and emotions. What is the bhāva or feeling of Indian aesthetics?

Preaches Bharata, भू इति करणे धातुः। तथा च भावितं वासितं कृतमित्यनर्थान्तरम्। लोकेऽपि च प्रसिद्धमहो ह्यनेन गन्धेन रसेन वा सर्वमेव भावितमिति तच्च व्याप्त्यर्थम्। The root Bhū, with 'i' suffixed, is in the sense of 'doing'. And so bhāvita, vāsita (saturated), 'kṛta' (done) are not other than synonyms. In the popular world too it is well known, 'Oh, by this perfume or juice the whole of it (perfume or juice) is bhāvita.' And that bears the meaning of vyāpti permeation (*Ibid.*). Hemacandra writes in his Kāvyānuśāsana, भावयन्ति व्याप्नुवन्ति सामाजिकानां मनः इति भावाः स्थायिनः व्यभिचारिणश्च। Bhavayanti, saturate over, permeate the mind of well-disposed persons, as such are called bhāvas—feelings, permanent and passing (CH-II). Thus feelings are certain trends that permeate and pervade the mind. What then is mind, according to Indian Psychology? उभयात्मकमत्र मनः संकल्पकम् Manas herein is embodying both, and cognitive (Sāṃkhya-Kārikā-27) एकादशसु इन्द्रियेषु मध्ये मन उभयात्मकं बुद्धीन्द्रियं कर्मेन्द्रियं च, चक्षुरादीनां वागादीनां च मनोऽधिष्ठितानामेव स्वस्वविषयेषु प्रवृत्तेः। तद् असाधारणेन रूपेण लक्ष्यति—संकल्पकं मन इति। संकल्पेन रूपेण मनो लक्ष्यते। आलोचितमिन्द्रियेण वस्तु इदमिति सम्मुग्धमिदमेवं नैवमिति सम्यक् कल्पयति, विशेषण-विशेष्यभावेन विवेचयति इति यावत्. Amongst the eleven organs manas embodies both, knowledge-organ as well as action-organ; since eye etc. and speech etc., only when ridden by manas, prove efficient with respect to their respective objects. And that is defined by its differential form, manas is cognitive. Manas is defined as the form of cognition. (Manas is cognition in that it) properly arranges the undiscriminated sensation of the (outer) organ, "an object it is", into "it is so, it is not so",

in other words, discriminates in terms of subject and predicate—(Tattva-Kaumudī-27). Moreover, the knowledge-organs and action-organs are called vāhya-karaṇa-outer-organs, while manas is called antaḥkaraṇa—inner organ, which is शरीराभ्यन्तरवृत्तित्वादन्तःकरणम् the inner organ bscause of its functioning from inside the body—(*Ibid*-33).

The manas of Sāṃkhya seems to show a parallelism with the brain of modern physiology. Modern physiology takes the nervous brain to be the seat of mind. And like unto the manas of Sāṃkhya, the brain of modern physiology too is (*a*) ubhayātmaka-projecting both the sensory and motor outer organs, sense organs and muscles, (*b*) saṃkalpaka-creating full-fledged cognition,—perception and volition with their discriminated meanings, out of ālocana- bare sensation, undiscriminated sensory-motor impulses generated by external stimuli at the sense-organs and muscles, by atttaching and relating them to particular association-trains and (*c*) antaḥkaraṇa- inner organ, against sense-organs and muscles which are the outer organs. Should then manas be identified as the brain, and bhāva permeating manas be identified as the nervous energy permeating the brain? Where is then the place of those mental forms experienced as the so called feelings and emotions, within the scheme of manas?

The brain of modern physiology is a part of the central nervous system whose nature is to take in external stimulation as sensory impulses at the sense organ at one end, and let them out as motor impulses through the muscles at the other. The brain acts as the intervening agency for transfering the neural impulses from the sensory into the motor region. With this capacity the brain happens to have projected within it both the sensory impulses at the sense-organs and the motor impulses at the muscles. So far as the sensory impulses are being projected in the brain, it is perceptive mental activity. So far as the motor impulses are projected in the brain it is the volitional mental activity. Where is then the place of feeling within the nervous scheme? Physiologists, however, attribute to the nervous system the principle of acquiring habits. The external stimulus is responsible for only various random and miscellaneous neural impulses. There is then the tendency of the nervous system to retain memory-traces of the particular sensory-motor circuit travelling which the random impulse happens to make the successful adapting response. What remains then of nervous action to underlie the mental form of feeling is only this tendency of the nervous system to retain memory-traces of successful sensory-motor reaction

to the external stimulus. But then nothing remains of this tendency within the nervous scheme as soon as modern biologists build the concept of "organic selection" or "natural selection". Physiologists may, however, talk of the economics of nervous reaction. The potential nervous energy liberates portions of it in the form of kinetic neural impulses under the impact of external stimulations. Sensory-motor activities would then be pleasant or unpleasant in accordance with the quantity of nervous energy consumed by them. If the pressure of the liberated energy is greater than what can be consumed by the sensory-motor activities they would be experienced as unpleasant, when at par they are pleasant, when less they are neutrally toned. No doubt, a rationale of pleasantness and unpleasantness is put up under such a stand-point, but pleasantness and unpleasantness are made to possess equal value in the economy of the mind. Since meanwhile no mind is left recognised at all. Nothing is explained as to why the organism should seek pleasurable experiences and shun unpleasant ones. And pleasure and pain are nothing if they are not pleasant and unpleasant, agreeable and disagreeable, sought and shunned respectively by the whole organic being.

Pleasure and pain at once indicate that the energy which mind is filled with has got of itself a definite direction of movement which it likes and which if interrupted it dislikes. In other words, a self-stimulated dynamic ego with a definite end of being, opposing the contradictory not-being, must be supposed wherever there is the question of liking and disliking. In modern physiology the nervous energy, so far as it is contained in the brain, is studied as a mechanical energy which is not considered to possess any movement of its own, independent of the external stimulus. Modern physiology as such will never rationalise the pleasant-unpleasant feeling. Is the same fate in store for manas of Indian psychology? Is bhāva permeating manas a mechanical energy, so that manas is saṃkalpaka-cognitive, knowing the external object, alone with no feeling-form in its scheme? Bhāva or feeling is expressly stated to be a mental form by Abhinavagupta, भावशब्देन तावच्चित्तवृत्तिविशेषा एव विवक्षिताः—by the word bhāva certain mental forms are intended (Abhinava-bhāratī-VII). Unlike and in contrast with the mechanical nervous energy of modern physiology, bhāva of Indian psychology, which is the energy permeating the whole manas or mind, has itself got a 'vṛtti'-operation or form, pariṇāma, transformation of its own. Bhāva or feeling which is the whole citta or mind, is itself again a citta-vṛtti-mental trans-

formation or form. In other words, manas of Indian psychology is a sva-prakāśa—self-stimulated energy over and above being saṃkalpaka—cognitive ; and evidently bhāva or feeling, according to Indian Psychology, embodies this self-stimulating aspect of manas or mind. It may be interesting to note here that although Indian physiology recognises mastiṣka-brain within the animal-structure, it yet posits the source of manas outside the brain and within the heart, which is then called hṛt-pinda or mass containing hṛd or mind. However, without entering in this connection into a study of the heart in Indian physiology, let it be laid down that manas of Indian psychology is made up of an energy far more comprehensive than the mere nervous energy which the brain of modern physiology is said to be composed of ; so much so that while the brain cannot give mental form beyond perception and volition, manas does. Thus accoding to sāṃkhya, the saṃkalpaka manas-cognitive mind is only a lower aspect of the whole antaḥkaraṇa-energy which is further characterised by ahaṃkāra-ego, and mahat-self-expansion. **अन्तःकरणं त्रिविधम्** The inner organ is of three kinds (sāṃkhyakārikā-33), **बुद्धिरहंकारो मन इति** buddhi or mahat, ahaṃkāra or ego, and manas-(Tattva-kaumudī-33). The study of bhāva or feeling in Indian psychology is based on these concepts of mahat and ahaṃkāra of Sāṃkhya.

* * * *

Like unto the Hegelian dialectics of thesis, anti-thesis and synthesis, Sāṃkhya of India has got the traiguṇya-concept of sattva-being, tamas-not being and rajas-energy,-as embodying prakṛti-the ultimate cause, the ultimate principle of existence. Prakṛti is mulā-ultimate, because it is sva-prakāśa-self-stimulated.

Self-stimulation, first of all, implies that it is always a vṛtti or a cause transforming into effect ; since herein the stimulation is within the cause itself. **परिणाम-स्वभावा हि गुणा नापरिणम्य क्षणमप्यवतिष्ठन्ते** The properties (Sattva, tamas and rajas) having transformation as the inherent nature, do not stand untransformed even for a moment (Tattva-Kaumudī-16). Secondly, while mechanical stimulation implies a vṛtti or transformation in which the effect is produced at the expense of the cause, self-stimulation implies a dynamism in which the effect produced does not take away from the intregity of the cause ; the effect is integrated within the cause, so that the cause in producing the effect only enlarges itself, expands, and not changes, into the effect. **यद्यप्यव्यक्तस्यास्ति परिणामलक्षणा क्रिया तथापि परिस्पन्दो नास्ति।**

Although the ultimate cause has got activity in the form of transformation yet there is no leap from an antecedent state into a consequent state-(Ibid-10). So, in Sāṃkhya self-stimulation is called the principle of mahat-growth, expansion. It is a seed growing into the tree and not a total antecedent transforming into a total consequent. In view of this unity between cause and effect, the vṛtti under self-stimulation is called prakāśa—expression, and the cause is called the avyakta—unexpressed, latent of the effect which is called vyakta—expressed, manifest.

While the vṛtti under mechanical stimulation is bipolar, consisting of cause and effect, the dynamism of self-stimulation is tripolar—avyakta and vyakta, ridden by a third aspect which binds together the avyakta and vyakta into one sva or self. This third aspect of the vṛtti under self-stimulation is called in Sāṃkhya ahaṃkāra—ego, and responsible for the birth of the individual sva or self, called jīva—animal, organism. The animal, according to Sāṃkhya, is just a principle of mahat—growth, expansion, a principle of sva-making, self-preservation, of breaking externality of, and attaching and integrating what is external within what is being. Thus the animal shows, first of all, a scheme of being, occupying space, being matter, being tanmātra—molecules, being chemical elements—mahābhūta. The ego then breaks their externality as inorganic matter, and integrates them within its own being as dhātu organic elements, such as asthi-bone, majjā—marrow, meda-fat, māṃsa—flesh etc. दोष-धातु-मल-मूलं हि शरीरम्—Body is based on doṣa, dhātu, mala.—(Suśrūta-saṃhitā-XV, 2). But they too are external, and the ego breaks their externality too and integrates them further within its own being as vāta—wind, pitta—bile and śleṣman—phlegm, composing the so called nervous indrya-energies underlying the sensory-motor organs of the animal. The ego breaks their externality too and integrates them to its pure being as the antaḥkaraṇa, composed of vāyu or the pure energy. (cf. Sāṃkhyakārika—29. The pure energy, known under the five names, viz. prāṇa, etc., in accordance with the five seats of it in the animal-body, constitutes the very life of the general antaḥkaraṇa.) What is this antaḥkaraṇa the pure energy, the pure being of the ego?

The ego is the third aspect of the tripolar vṛtti of self-stimulation. It is the unifying principle, integrating cause into effect, in which the cause remains as the cause, it neither gains nor loses anything in producing the effect. In other words, the ego is a principle of 'sweet will' or pleasure. The animal is thus a scheme

of pleasure-principle expanding into reality-principle. Pleasure expands, and does not change, into reality. Pleasure thrusts out upon the external world, breaks the barrier of externality of the latter, and makes it one, and in harmony, with itself, so that the thrust into the external world at last means a return to the pleasure.

The animal is animated with pleasure. Pleasure means being real. The animal, animated with pleasure, proceeds to establish itself in the external world. It can establish by breaking the barrier of externality of the external object, and absorbing it with-in its own being. Thus ego or pleasure has three aspects. So far as it is pure ego or pure pleasure it is called in Sāṃkhya, laghu prakāśaka sattva—light expressing pure being. The external world, contradicting by its externality the pure being of the ego or pleasure is called guru varaṇaka tamas—heavy covering darkness. So far as the ego struggles with the external world to break the latter's externality, and bring about integration between the two, the ego is called upaṣtambhaka cala rajas—supporting dynamic energy. Most suitably are then pure ego or sattva, the externality or tamas, and the adapting dynamism or rajas are called in Sāṃkhya, pleasure, dullness and displeasure. **प्रीतिः सुखं प्रीत्यात्मकः सत्त्वगुणः अप्रीतिर्दुःखम् अप्रीत्यात्मको रजोगुणः, विषादो मोहः विषादात्मकस्तमोगुणः** prīti is pleasure, the property of sattva embodies prīti, aprīti is displeasure, the property of rajas embodies displeasure, viṣāda is dullness, the property of tamas embodies dullness (Tattva kaumudī-12).

With-in the animal, the ego or the antaḥkaraṇa or the pleasure-principle has three stages to operate from, *viz.*, at the elemental body, at the indriya-sensory-motor outer organs, and at the anthakaraṇa itself. At the elemental body the ego's operation consists of digestion and assimilation of the external food. Herein the externality of the object is totally broken, but the elemental body into which the food is assimilated, is itself much external to the pure ego or antaḥkaraṇa ; since, as said before, the organic chemical elements have to be further broken into vāta—wind, pitta-bile, sleṣman-phlegm, composing the indriya-energies, before being finally converted into anthkaraṇa or the pure energy. Hence, the pleasure-principle working at the elemental body is mostly a feeling of dullness. The outer indriya-energy, composed of wind, bile and phlegm, immediately precedes the pure energy of antaḥkaraṇa. The indriya-energy is at once converted into saṃkalpaka or cognition, which is but the manas-aspect of the antaḥkaraṇa. Hence the pleasure-principle is more expressed

at the indriya or sensory-motor organic activities. It is then pleasure as opposed to dullness. But unfortunately it is a pleasure interrupted. It is displeasure that works at the sensory-motor activities of the outer organs. At the outer indriya, the external object is not assimilated into the being of the animal in the way in which the external food is assimilated into the elemental body. The external object remains in tact as such at the indriya-outer organs. The antaḥkaraṇa, as the ego, rushes over the indriyas and lashes upon the object in this way and that way, with the sole aim of breaking its externality and attaching it to the being of the animal concerned. Obviously, herein a complete assimilation of the external object is not possible. Unpleasantness and dissatisfaction always lurk behind the temporary success that is achieved for the moment. The general tone of the pleasure-principle is unpleasantness and dis satisfaction at the indriya-stage of the animal. The third stage is at the antaḥkaraṇa itself. At the indriya-stage temporary adjustments are sometimes accomplished. At those moments antaḥkaraṇa clutches, on the one hand, the external object at the indriya, and, on the other hand, returns to itself and enjoys its own stability and harmony in a full pool of pleasure. At the antaḥkaraṇa-stage, the pleasure-principle is a full and stable pleasantness.

Thus according to Indian psychology, saṃkalpaka or cognition, including perception and volition, is only a small part of the whole mind. Mind is essentially, and for the larger part, feeling. Feeling is the background and source of all the activities and experiences of the animal. The animal is made up of a scheme of feeling which means self-expansion, consisting in breaking the barrier of the external world and attaching it to the being of the self. With such a meaning of the animal and its mind, an act of perception or volition is much superficial to the whole mind. The whole mind is a process of breaking into feeling by the execution of volition, the external object given by perception. Hence while Bharata regards bhāva or feeling as that which permeates the manas, which forms the essence of the mind, he calls perception and volition, only vibhāva-incentive and anubhāva-reaction, of the more fundamental bhāva or feeling. अथ विभाव इति कस्मात् ? उच्यते—विभावो नाम विज्ञानार्थः । विभावः कारणं निमित्तं हेतुरिति पर्यायाः । And then where-from is vibhāva? The answer is vibhāva means cognition. Vibhāva, cause, stimulus, indicator—these are synonyms (Nāṭyaśāstra-VII). According to Indian psychology, perception and volition are external to the mind, they compose only the external

incentive and reaction respectively of the mind whose essence is feeling. Yet, however, एवं ते विभावानुभावसंयुक्ता भावा इति व्याख्याताः। अतो ह्येषां भावानां सिद्धिर्भवति। Thus those feelings are always attached with vibhāva and anubhāva, it is from them that feelings are fulfilled (*Ibid*).

Feeling, which is thus the essence of the mind, is, according to Indian psychology, a dynamic principle of mahat—self-expansion, a dynamic principle of pleasure expanding into reality. Within the animal-scheme it has three stages of operation, *viz.* (1) at the chemical elements composing the body, where the vibhāva or the external object is called food, anubhāva or reaction is healthy or unhealthy composure of the body, and the general tone of the bhāva or feeling is dullness; (2) at the indriya or the sensory-motor outer organs, where the vibhāva or the external world is perception, anubhāva or reaction is volition, and the general tone of bhāva is unpleasantness or dissatisfaction, or pleasure interrupted; (3) at the antaḥkaraṇa or mind itself, where vibhāva or external object is no more perception of externality, anubhāva or reaction is no more a volition directed towards anything external, and bhāva or feeling is full pleasure, in complete harmony with reality. Thus Bharata divides feeling under three heads, *viz.*, (1) Vyabhicārin or passing, referring to the dull feelings at the elemental stage, (2) Sthāyin or permanent, referring to the feelings of dissatisfaction at the indriya-stage, and (3) Sāttvika-mental, referring to the pleasant fullness of feeling at the antaḥkaraṇa-stage. Preaches Bharata, तत्र अष्टौ भावाः स्थायिनः त्रयस्त्रिंशत् व्यभिचारिणः, अष्टौ सात्त्विका इति भेदाः।

And the eight are the permanent feelings, thirty-three are passing, eight are mental—these are the varieties (*Ibid*).

Vyabhicārin bhāva or passing feeling:—These are the feelings of dullness. They are the outcome of chemical changes going on within the animal-body. Organic chemical changes affect in various ways the composition of wind, bile and phlegm, which comprise the medium of action for antaḥkaraṇa. These chemical affections of wind, bile and phlegm are experienced as certain dull feelings. They belong to the elemental body and are no permanent traits of the antaḥkaraṇa. That is why they are called Sañcārin bhāva—passing feeling. They pass out of the body as soon as proper food and medicine are administered. Comments Abhinavagupta :—

ये पुनरमी ग्लानिशंकाप्रभृतयश्चित्तवृत्तिविशेषास्ते समुचितविभावाभावाज्जन्मप्रमध्येऽपि

न भवन्त्येव। तथाहि रसायनमुपयुक्तवतो मुने ग्लान्यालस्य-श्रम-प्रभृतयो नोत्तिष्ठन्ति यस्यापि वा भवन्ति विभावबलात्तस्यापि हेतुप्रक्षये क्षीयमाणाः संस्कारशेषतां नावश्यमनुबध्नन्ति।

And those feelings, called glāni—exhaustion, saṃkā-apprehension, etc., may not occur even during one's whole life, on account of the absence of adequate stimuli. So of an ascetic, taking medicinial tonic, exhaustion, laziness, fatigue etc., do not rise at all; of him again, of whom they rise on the strength of external stimuli, they wither away with the withdrawal of stimuli, and do not necessarily form a residue of organic memory—(Abhinavabhāratī-VI). Evidently, an exhaustive treatment of these feelings would form the subject more of Āyurveda—the medical science. Bharata counts thirty-three of these passing feeling :—

निर्वेदः ग्लानि-शङ्काख्यास्तथासूया मदः श्रमः।
आलस्यं चैव दैन्यं च चिन्ता मोहः स्मृतिर्धृतिः॥
व्रीडा चपलता हर्ष आवेगो जडता तथा।
गर्वो विषाद औत्सुक्यं निद्रापस्मार एव च॥
सुप्तं विबोधोऽमर्षश्चाप्यवहित्थमथोग्रता।
मतिर्व्याधिस्तथोन्मादस्तथा मरणमेव च॥
त्रासश्चैव वितर्कश्च विज्ञेया व्यभिचारिणः।
त्रयस्त्रिंशदमी भावाः समाख्यातास्तु नामतः॥

(Nāṭya-śāstra—VI, 19-22).

Nirveda--self-disparagement ; glāni--exhaustion ; saṃkā--apprehension ; asūyā--intolerance ; mada--rapture ; śrama--fatigue ; ālasya--laziness ; dainya--dispiritedness ; cintā--broodiness ; moha--loss of wit ; smṛti—recollection ; dhṛti--contentment ; vrīḍā--shyness ; capalatā--fickleness ; harṣa--gladness ; āvega--consternation ; jaḍatā--dullness ; garva--vanity ; viṣāda--sorrow ; autsukya--eagerness ; nidrā--drowsiness ; apasmāra—epilepsy ; supta--sleep ; vibodha--sleeplessness ; amarṣa--retaliation ; avahitthā-reserve ; ugratā--fierceness ; mati--discernment of meaning ; vyādhi--anguish ; unmāda--derangement of mind ; maraṇa--melancholy ; trāsa--alarm ; vitarka--supposition.

Sthayin bhāva or permanent feelings :—These are the feelings of dissatisfaction occurring when the animal is fighting the environment with sensory-motor outer indriya-activities. Food consumed by the animal covers little of the external world. The outer world extends into boundless vastness. Opposing environmental forces are numerous and come in streams of unending trains. The animal fighting them with sensory-motor indriya activities knows no respite

from birth till death. Conflict between the pleasure-principle and the reality-principle, which is feeling, becomes most expressed and persists unabated. There grows, however, certain broad-based strategies of the fight, which, through generations of working of the principle of Saṃskāra or psycho-physical modification, the principle of acquiring habits and setting up of 'organic memory,' saturate the antaḥkaraṇa permanently. भावैरधिवासितम्—permeated with the feelings (Sāṁkhya-Kārikā-40) यथा सुरभिचम्पकसम्पर्काद् वस्त्रं तदामोदवासितं भवति। —just as a piece of yarn, through contact with the fragrant campaka-flower, becomes permeated with its perfume (Tattvakaumudī —40). This principle of psycho-physical saṃskāra or modification is called vāsanā—organic memory. But it is not the passive mechanical organic memory of modern physiology. Antaḥkaraṇa or the mind of Indian psychology is a self-stimulating principle. Hence it is that—तस्माद् भावैरधिवासितत्वात् संसरति—Out of that permeation with the feelings, it moves—(*Ibid*). Vāsanā of Indian psychology is self-stimulated principle of dynamism. Vāsanā thus means unconscious wish. The permanent feelings of Indian psychology are regarded as such because they form the vāsanā—the permanent unconscious wishes of the animal. Comments Abhinavagupta,—रत्यादयस्तु सम्पादितस्वावश्यकर्तव्यतया प्रलीनकल्पा अपि संस्कारशेषतां नातिवर्तन्ते, कर्तव्यान्तरविषयस्य रत्यादेरखण्डनात। यथाह पतंजलिः न हि चैत्र एकस्यां स्त्रियां रक्त इत्यन्यासु विरक्त इति।—But rati-love etc., although they seem to come to a rest after their business at the moment is accomplished, yet do not altogether pass out of the residue of organic memory, since the continuity of rati-love etc., remains unbroken having always some thing next to do. As said Patanjali (the author yoga—the science of mental control), "It is not a fact that since caitra is attached to one woman he is disinterested in other women"—(Abhinava-bhāratī VI).

As to the difference of these permanent feelings, which form the inherent permanent wishes of the animal, from the passing feelings, which are accidental and do not form such vāsanā of the animal, Abhinava-gupta remarks, तथाहि ग्लानोऽयमित्युक्ते कुत इति हेतुप्रश्नेन अस्थायितास्य सूच्यते। न तु राम उत्साहशक्तिमानित्यत्र हेतुप्रश्नमाहुः। अत एव विभावास्तत्तोद्बोधकाः सन्तः स्वरूपोपरंजकत्वं विदधाना रत्युत्साहादेरुचितानुचितत्वमात्रमावहन्ति। न तु तदभावे सर्वदैव ते निरुपाख्याः वासनात्मनां सर्वजन्तूनां तन्मयत्वेनोक्तत्वात्। व्यभिचारिणां तु स्वविभावाभावे नामापि नास्ति।

Thus when is said 'He is exhausted,' at once is queried, 'whence?'—and by this query into th cause is indicated its imper-

manence. But in the case of "Rama is endowed with the vigour of utsāha-inspiration," no query as to the cause is talked of. Hence the vibhava-incentive perceptions of the external objects, in that case, being arousers (and not makers), rendering edifiers of themselves, bring about only the propriety or impropriety of rati-love, utsāha-inspiration, etc. And it is not that in their absence those (rati etc.) become indiscernible in all respects, since permeation by them is spoken of all animals embodying vāsanā. Of the passing feelings, however, not a trace is left in the absence of their respective stimuli. (*Ibid*).

The permanent feelings comprise the vāsanā—permanent unconscious wishes of the animal. जात एव हि जन्तुरियतीभिः संविद्भिः परीतो भवति —An animal, as soon as it is born, becomes permeated by these mental activities. (*Ibid*). न हि एतच्चित्तवृत्तिवासनाशून्यः प्राणी भवति।—Not an animal is there, bereft of unconscious memory of these mental trends. (*Ibid*).

The permanent feelings embody the permanent fundamental motive-forces underlying all the experiences and activities of man. The whole life of man centres round these feelings. Theirs is prādhānya—dominance in the life of man. तत्र पुरुषार्थनिष्ठाः काश्चित् संविद इति प्रधानम्—And there attached to puruṣārtha—the ends of life (*viz.*, dharma-permanent well-being, artha-wealth, and kāma-desire) are some of those mental forms, as such dominant. (*Ibid*). एवं रत्यादीनां प्राधान्यं—Thus of rati-love etc., (rati, krodha-anger, utsāha-inspiration) is the dominance. (*Ibid*). रत्यागंतया तु पुमर्थोपयोगित्वमपि स्यादेषाम्—On account of their being auxiliaries to rati etc., the utility of purusartha too accrues to these (*viz.*, hasa-laughter, soka-grief, bhaya-fear, jugupsa-disgust, and vismaya-wonder). (*Ibid*).

Bharata counts eight of these permanent feelings :—

रतिर्हासश्च शोकश्च क्रोधोत्साहौ भयं तथा।
जुगुप्सा विस्मयश्चेति स्थायिभावाः प्रकीर्तिताः॥

(Nāṭya-Śāstra—VI, 18).

Rati-love ; hāsa-laughter ; śoka-grief ; krodha-anger ; utsāha-inspiration ; bhaya-fear ; jugupsā-disgust ; vismaya-wonder.

Sāttvika bhāva or mental feelings.—These are the feelings of fullness of feeling. When a feeling is full, that is, when adaptation of the pleasure-principle with the reality-principle is complete, antaḥkarana or the pure energy (known under the five names of prāṇa etc.), proceeds from its five different seats in the animal-body, towards the

hṛt-pinda or the heart, which is the source of the pure energy. This return home of the lifeforce has its repercussions on the whole chemical and nervous arrangement of the body, which otherwise remain fitted for activities of the passing and permanent feelings. Changes in wind, bile and phlegm under those repercussions stir the aṇtaḥkarana with particular corresponding modes, and those are the so-called mental feelings. They are called sāttvika or mental, because their source is the behaviour of the antaḥkarana forgetful for the moment of the reality-principle. Preaches Bharata, इह हि सत्त्वं नाम मनःप्रभवम् तच्च समाहितमनस्त्वादुत्पद्यते। मनसः समाधौ सत्त्वनिष्पत्तिर्भवतीति। Under the state of things sattva means' 'born of the mind.' And that issues from having the mind under full concentration or settling down. When the mind settles down, emanation of sttava occurs. (*Ibid* VII, under 146).

Bharata counts eight of these mental feelings :—

स्तम्भः स्वेदोऽथ रोमाञ्चः स्वरभेदोऽथ वेपथुः।
वैवर्ण्यमश्रुप्रलय इत्यष्टौ सात्त्विकामताः॥

(*Ibid*-148).

Stamha-stupor ; sveda-sweat ; romānca-horripilation ; svara-bheda-cracking of voice ; vepathu-tremor ; vaivarṇya-paleness ; asru-tear ; pralaya-dissolution.

These feelings may be called spiritual feelings, and would form the subject more for yoga-śāstra the science of mental control.

* * * * *

Preaches Bharata :—

यथा नराणां नृपतिः शिष्याणाञ्च यथा गुरुः।
एवं हि सर्वभावानां भावः स्थायी महानिह॥

—Just as the king is amongst men and the preceptor amongst disciples, so is the permanent feeling amongst feelings—great and glorious. (*Ibid*-12).

TOWARDS MEASURING SOCIAL DISTANCES

N. S. N. Sastry and S. K. Ramachandra Rao (*Bangalore*)

Introduction

An individual is born to a society; but actually, as LaPiere and Farnsworth[1] note, he is born 'into a presence of "tangible" human beings; for society is an abstraction'. Although the general social pattern is bound to be a large influencing factor in the individual behaviour, it must not be forgotten that the social unit or group which constitutes the immediate social environment plays a significant role in determining the individual's behaviour patterns,. modes of expression, emotion and action. Due to sectional isolation, (i.e., being forced by necessity to live in a certain place and amid certain types of people over a considerable stretch of time), human beings are prone to develop particular habits of thinking and living that are sometimes vastly different from those of others in a different sectional isolation. The means of livelihood will endanger a difference also such as is evident in class struggles and urban-rural conflicts; classes come to be distinguished, communities specified, and groups defined owing to a variety of social processes, sometimes natural (as in geographical distribution of a population) and sometimes artifical (as when due to the integrating forces of leadership or peculiar social and political situations for instance, Jinna developing a separation mentality among the Moslems). Thus we arrive at a concept of group, as the central factor in social dynamics. "The study of social organization deals primarily with the significant grouping of individuals"[2].

The group is best described by R. E. Park:[3] "Whenever individuals come together even in the most informal way, no matter how strange they may be to one another, nor how great the social distances that separate them, the more fact that they are aware of one another's presence immediately sets up a lively exchange of influences, the first effect of which is to produce in each a mood, a *Stimmung*, under the influence of which the individual's behaviour—his thought and sentiments, if not his actions—are controlled and directed". Group

1 *Social Psychology*, McGraw-Hill, 1942, p. 50.
2 R. H. Lowie: *Social Organization*, Routldge & Kegan Paul, 1950, p. 3.
3 Cited in LaPiere: *Collective Behaviour*, McGraw-Hill, 1938, p. 16.

may be viewed as a functional unit of social intraction. It has been reasonably assumed in the study that group is a reality, and the feeling of belongingness to the group is an important determinant of individual behaviour.

PROBLEM

This study aims to understand how far this group-belongingness or group-indentification will cause a certain distance to be created between itself on the one hand, and other groups in the particular social structure on the other. In the Indian society, forces of circumstances have resulted in defining a number of distinct groups, which differ from one another in ways of thinking, feeling and acting in varying degrees, although basically they all belong alike to the Indian society. As was pointed out by LaPiere and Farnsworth,[4] any society is an abstraction; what is practical and tangible is a group which contains the individual. Thus when a man says he is an Indian, it is likely he will not be greatly affected by this conviction; he is aware to a greater extent of being a member in a particular group such as Bengali, Mahratta or Gujarati, and the pattern of his behaviour will be mostly ordered to this frame of reference.

When society is defined as a system of personal and impersonal relationships or as forms of integration between conscious human beings, we must necessarily take into account attitudes as social elements which express the particular patterns of interaction such as stereotypes. Much work has already been done on the subject of attitudes[5] and it has been recognised as of major importance. An attitude will give us an insight into the 'image of society' in every individual. It comes into operation in concrete behavioural situations.

The study on hand is a study in attitudes: it undertakes to discover the attitudes a group of individuals have towards other groups. On the basis of the type and intensity of attitudes it is possible to determine the social distances that exist between various groups of individuals in our society.

PLAN AND PROCEDURE

India has truly been described as a vast sub-continent; It contains many ethnic types in a variety of admixture. Due to a momentous and to an extent quixotic historical evolution, the present structure of

[4] Cited earlier (1).

[5] Refer, Sastri, N. S. N. & Rao. S. K. R.: *An Investigation into the Personality Values*, Jour. Ind. Inst. of Science, Ch. IV (in Press).

Indian society consists of a large number of well defined groups. It is possible to variously classify them, in terms of geographical distribution or local contiguity (coresidence), language, and caste or community. But it is erroneous to regard any one classification as real, in the sense that it will hold good for all conditions. When we classify two groups as Gujaratis and Bengalis, we have local contiguity and language in mind ; but it may not be true when we consider a Gujarati Hindu and a Bengali Moslem : a Gujarati Hindu is more akin to a Bengali Hindu rather than a Gujarati Moslem. Therefore, in the present investigation, all these norms of classification have been mixed to yield twenty-two groups, fairly distinct from each other.

A social-distance scale was constructed (after Bogardus) consisting of eleven points : each point was represented by an attitude of a certain type and intensity. From one to five, attitude is positive and gradually diminishes in warmth of feeling, till six which is almost neutral attitude. From seventh to eleventh, the attitude is negative (aversion), gradually increasing in intensity. Thus on the scale, *one* would mean little or no social distance whereas *eleven* would mean maximum social distance.

Thus an inventory was developed. The respondent was requested to mark off the cell which he thinks most appropriate ; he was to have in mind a particular group (given in columns) and go through the list of eleven statements (given in rows) and mark the particular statement he thinks is best so far as his attitude towards that group is concerned. Thus we are likely to get twenty-two marks.

Subjects

The subjects chosen for this pilot study were a group of 70 Gujarati Teachers of the Training College, 15 of them not married. Out of them 15 were women teachers. Their age ranged between 22 and 46 years. Most of them are Hindus, speaking Gujarati language. Some of them have stated that they have had no occasion to come into contact with certain groups listed in the inventory, and that they had formed the attitudes on the basis of reports and general impressions.

Method

When the properly filled-in inventory copies were received back, a table was prepared containing the group judgments. For every group, there was a score in terms of the attitudes (scale-points one to

eleven). Mean ranks, coefficients of variations and were calculated. Tests of normality were applied, to find out whether there was a normal distribution.

Results and Discussion

(1) When the Gujarati subjects were asked to record their preferential judgments, there was a pronounced favourable prejudice towards themselves and their immediate geographical neighbours.

Object-group	mean rank
Gujarati	1
Hindi-speaking	2
Hindu	3
Maharashtrian	4
Kashmeri	5
Bengali	6
Parsi	7

It will be seen that most of the subjects being Hindus by faith have recorded a high preference to this group even though its scope is far wider than Gujarat (*i.e.*, there are Hindus in other parts of India also). Parsi-group also is considerably preferred, probably because of the local contiguity (the major section of the Parsi population is settled in and round about Gujarat). The Maharashtrian and Hindi-speaking groups are preferred obviously because of immediate neighbourhood. The preference of Kashmeris and Bengalis, who are not immediate neighbours, may have been a result of general impression.

But all these groups excepting Hindu) are entirely northern groups ; they belong to the upper part of India, thus probably constituting an enlarged in-group. The closeness of this ingroup bears contrast with the ratings of the Gujaratis as regards the South Indian groups.

Object-groups	mean rank
Tribesman	22
Tamilian	21
Malayalee	20
Moslem	19
Kannadiga	18
Andhra	16

Although tribesmen and Moslems are not confined to South India, their preference value has been very low, because of racial and national prejudices. It is difficult to explain the strong prejudice entertained by the Gujaratis against South Indian groups: it may be because of lack of sufficient opportunity for them to come into close contact with these, or it may be due to a halo impression formed on the basis of a few stray specimens, or it may be because it appears as an outgroup. It is interesting to note that udiyas also who do not belong to South India have been rated low.

(2) Although the immediate neighbours are preferred, the co-efficient of variation in respect of them is large when compared with others. This means that although there seems to be a smaller central value, the divergence from it (variation) is large. *e.g.*,

Outgroups	Coefficient of variation
Gujaratis	67.7
Hindi-speakers	112.2
Hindus	64.7
Maharashtrians	62.6

This large co-efficient of variation indicates that great divergence of judgment prevails among the individuals of the Gujarati-group tested, in their preferences in regard to these groups. In other words, their preference is not unanimous.

With this can be contrasted the low co-efficient of variation as regards the Southern and some other groups.

Object-groups	co-efficient of variation
Andhras	34
Tamilians	34
Rajasthanis	35.8
Tribesmen	36.5
Kannadigas	36
Assamese	38
Moslems	39.4

This indicates that the group of Gujaratis is fairly stable in their judgment of preference in regard to these groups. This again may be due to the fact that not having sufficient opportunity for close acquaintance, they are judging from a general impression, in which case the prejudice is likely to be uniformly consistent.

(3) When the tests of normality were applied, it was found that the frequency of ratings is normal in the case of udiyas, of Tamilians, Sikhs, Sindhis and Kashmeris, showing that they are systematically distributed about the central value. But the frequency distribution of the remaining groups is not normal. Probably there is no prejudice against these groups or if any prejudices exist, they tend to influence each person in rating uniformly. It is interesting to note that rating is not normally distributed even in regard to the group of Gujaratis themselves.

Conclusions

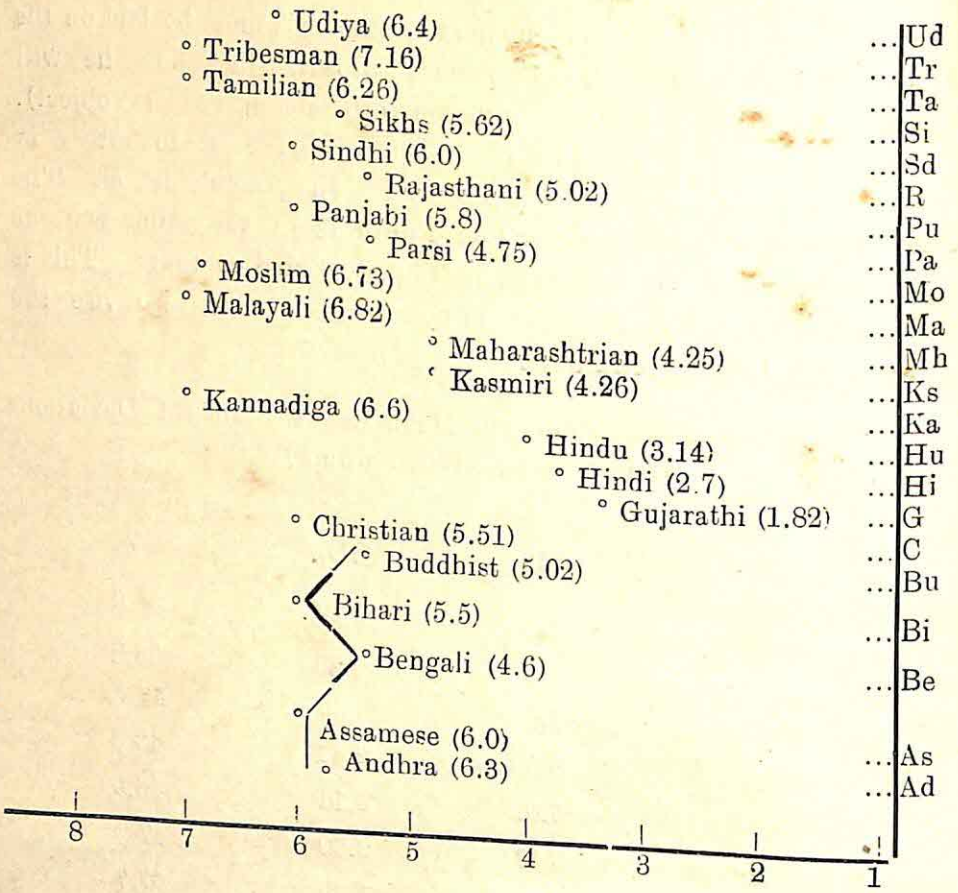
In this small pilot survey, it was found that a group of people living in a certain locality and in a particular surrounding are likely to form an ingroup (on the basis of local or lingual contiguity) towards which they are favourably disposed, and an outgroup towards which they are prejudiced. Apart from this structuring of the social field, there is also in evidence the fact that the attitude of individual members of the group are uniformly influenced by the outgroup, whereas it is likely that their attitude towards members of the ingroup will be coloured by personal experiences, in which case, uniformity is not possible. And we find also that the factor of prejudice is in operation in determining the degrees of discrimination between various groups. It is suggested that ignorance, (*i.e.*, lack of sufficient acquaintance) will result in a prejudice against its object. Prejudice may be defined here as an "attitude which manifests itself as an unwillingness to admit members of a given group to certain social relationships". The index of this prejudice has been taken as the basis of the concept of social distance.

This inventory suffers from a major defect—in that it is not action-oriented. The first aspect of prejudice, namely cognitive, (*i.e.*, how an individual is predisposed to look at a particular group) is all

that it can bring out. But the greater emphasis must be laid on the second aspect, namely the behavioural aspect, (*i.e.*, how he will actually respond in a given situation with reference to that object). A mere affirmation of a statement in a questionnaire or inventory is no certainty that it will be the portrayal of the possible action. The subject, in other words, must be forced to think in the same way as he would behave, by involving him in situational contexts. This is being contemplated by this Section now with a view to revise the inventory to better fruitfulness.

(The following table shows the Mean Ranks, Standard Deviations and Co-efficient of variation in twentytwo groups).

		M.	SD.	CV.
1.	Andhra	6.3	2.19	34.8
2.	Asamese	6.0	2.29	38.2
3.	Bengali	4.6	2.20	47.8
4.	Bihari	5.5	2.41	43.8
5.	Buddhist	5.02	2.11	42.0
6.	Christian	5.51	2.60	47.2
7.	Gujarati	1.92	1.30	67.7
8.	Hindi	2.7	3.03	112.2
9.	Hindu	3.14	2.03	64.7
10.	Kannadiga	6.6	2.38	36.0
11.	Kashmeri	4.26	2.10	49.3
12.	Mahrashtrian	4.25	2.66	62.6
13.	Malayalee	6.82	3.05	44.7
14.	Moslem	6.73	2.65	39.4
15.	Parsi	4.75	2.67	56.2
16.	Punjabi	5.8	2.29	39.5
17.	Rajasthani	5.02	1.80	35.8
18.	Sindhi	6.0	2.56	42.7
19.	Sikh	5.62	2.32	41.3
20.	Tamilian	6.92	2.35	34.0
21.	Tribesmen	7.16	2.61	36.5
22.	Udiya	6.4	2.88	4.50



(Mean Ranks)

SOCIAL DISTANCES

(Subjects: 70 Gujarathi teachers).

A COMPARATIVE STUDY OF PERSONALITY ADJUSTMENT AND ATTITUDE TOWARDS MARRIAGE AMONG COLLEGE AND UNIVERSITY STUDENTS

M. S. L. SAXENA (*Banares*)

INTRODUCTION

This paper gives the results of an attempt to study Personality Adjustment among College and 'Varsity students, and their attitudes towards some of the important aspects of marriage. Fred McKinney has pointed out, "The student is somewhat mature, yet young. He is still quite plastic so far as personality development is concerned." * Quite naturally, therefore, parents and teachers are deeply concerned over various problems related with the development of youth and their attitudes.

Attitudes towards various aspects of marriage have frequently caused considerable difference of opinion between the aged and the youth. This is one of those important problems which produces conflict between the aged and youth. We have therefore attempted to study students' attitude towards some of the important and interesting aspects of marriage. We thought this study more or less incomplete without an estimate of their personality adjustment, and therefore an objective study of personality adjustment based upon measurable facts has also been attempted. Little work in India on objective problems of personality was another factor which induced us to make such a study on students.

TESTING

Two questionnaires were prepared for this investigation. (*i*) The Personality Adjustment Questionnaire, and (*ii*) The Psycho-social Questionnaire about Attitude Towards Marriage. (See copies of the two questionnaires.)

The Personality Adjustment Questionnaire : The questionnaire carries 128 questions to be answered in "Yes," "No" or "?"

* McKinney. F., *Psychology of Personal Adjustment.*, p. 4.

(Doubtful or Indifferent), (*e.g.* 9. Are you happy and contented in your present home environment?). By this questionnaire we try to determine the individual's adjustment towards four aspects of life, *viz.*, (*a*) Home, (*b*) Health, (*c*) Social and (*d*) Emotional. Some of the questions have been adopted from Personality Adjustment Inventory by Bell * when we felt that those questions were in keeping with Indian conditions. Other questions have been selected by keeping in view Indian standards, customs, problems and specially the situations confronting or commonly experienced by Indian students in their day to day life.

The Psycho-social Questionnaire about Attitude Towards Marraige : The questionnaire contains 29 straight-forward questions. The first few questions seek informations regarding the individual's family, his position in the family and the economic status of the family. Most of the remaining questions seek to discover facts about the individual's attitude towards various problems allied with marriage, such as, choice of marriage partners, inter-caste and incaste marriages, divorce, dowry, and jewellery. Some of the questions, in this questionnaire suggest alternative answers for reply while some of the questions do not suggest any alternative answers.

The test was administered in July/August 1950, over a population of 120 students (all male) of Benares Hindu University who represented from Intermediate to Research classes. They were tested either individually or in small batches of two or three, so that individual supervision could be possible.

We also prepared a list of theoretically desirable answers to each question of the Personality Adjustment Questionnaire. For example, in the case of question no. 9 (Are you happy and contented in your present home environment?), if a person answers in "Yes" we may theoretically interpret it as a fair adjustment in home ; but if the answer is "No," we would say that the person does not appear to be well-adjusted in his home environment. Similarly a list of theoretically desirable answers to each question of the Personality Adjustment Questionnaire has been prepared. In scoring this questionnaire we allowed one mark to each question whose answer agreed with the answer in our list.

* Bell, H.M., *The Adjustment Inventory*, (Adult Form) 1938.

Results and Remarks

The Personality Adjustment Questionnaire

Grading : On the basis of their scores, the subjects were classified into seven grades ; A. to G. ; in accordance with the Normal Distribution Curve. Grade A. is the negative extremity and Grade G. is the positive extremity ; Grade D. being the average class. Table 1. gives the scale of grading.

Table 1.

Scale of Grading

		A	B	C	D	E	F	G
Total Personality	Upto	50	51-62	63-74	75-85	86-101	102-106	107+
Home Adjustment	Upto	10	11-14	15-19	20,23	24- 27	28- 29	30+
Health Adjustment	Upto	13	14-17	18-22	23-26	27- 29	30- 31	32
Social Adjustment	Upto	6	7-11	12-16	17-21	22- 25	26- 27	28+
Emotional Adjustment	Upto	8	9-12	13-16	17-21	22- 26	27- 28	29+

Mean and Standard Deviations: mean scores and Standard Deviations of Personality Adjustment and various aspects thereof (*viz.*, Home, Health, Social and Emotional) appear below in Table 2.

Table 2.

Average Scores and Standard Deviations

	Mean	Stndard Deviation
Total Personality Adjustment	80.66	14.13
Home Adjustment	20.87	4.80
Health Adjustment	23.45	4.71
Social Adjustment	17.60	5.61
Emotional Adjustment	18.80	5.37

Correlation Coefficients: Intercorrelations between the various aspects of Personality Adjustment have been determined on the basis of the scores. Employing Pearson's Product Moment Method we get the coefficients of correlations as shown in Table 3.

Table 3.

Correlation Coefficients

	Home	Health	Social	Emotional
Home				
Health	.37 ±.05			
Social	.22 ±.06	.05 ±.06		
Emotional	.50 ±.05	.55 ±.04	.30 ±.06	

Table 3 shows comparatively high correlations of Emotional adjustment with all the aspects, which imply that emotional aspect plays a leading role in personality adjustment. Correlation between Emotional and Health Adjustments is fairly high (.55). This shows that mental and physical health go together to a considerable extent; and the old saying "a sound mind in a sound body" appears to contain truth in it.

The Regression Equation: A Regression Equation has been devised which serves to give an idea of a subject's Emotional adjustment if we know his scores in Home, Health and Social adjustments. We have depended upon the method suggested by Guilford* in determining the Regression Equation and we get the equation as follows:—

$X_1 = X_2 . 3241 + X_3 \ 4878 + X_4 \ 2060 - 3,0285$ whereas X_1, X_2, X_3, and X_4, in this equation, stand for scores in Emotional, Home, Health and Social adjustments respectively.

A Comparative Study of Personality Adjustment: A comparative study of personality adjustment has been attempted on the basis of marital status, education and age of the subjects. On the basis of marital status we have classified our subjects into married people and unmarried people. Again our subjects are classified as Seniors and Juniors on the basis of their education. Post-graduate students have been classified as Seniors, while undergraduates are classified as Juniors. On the basis of age we have classified our subjects into Elders and Youngers. Elders are above 20 years and 6 months in age while Youngers are up to the age of 20 years an 6 months.

Table 4 shows the population (N) under these classifications, their mean scores and standard deviations (S.D.).

TABLE 4.

Mean Scores and Standard Deviations on the basis of various classifications

Classification	N	Mean	S D.
Married	40	82.73	11.07
Unmarried	80	78.61	15.66
Seniors (post-graduates)	59	82.20	15 87
Juniors (under-graduates)	61	77,67	12,07
Elders (above 20.6 yrs)	66	81.80	14.60
Youngers (upto 20.6 yrs)	54	76.90	13.70

* Guilford, J.P., *Psychometric Method*, p, 380

According to the above table Married people, Seniors, and Elders are slightly better adjusted than Unmarried, Juniors and Youngers respectively. The differences, however, are not significant.

Table 5 shows the population (N.), mean score and standard devition of our subjects on the basis of their present economic status.

TABLE 5.

Mean scores and Standard deviations on the basis of present economic status

Economic Status	N.	Mean.	S.D.
Annual income upto Rs. 2,000	28	76.6	14.4
Annual income upto Rs. 4,000	35	80.1	15.9
Annual income upto Rs 8,000	26	80.5	13.0
Annual income upto Rs. 12,000	12	80.3	14.3
Annual income above Rs. 12,000	14	88.7	12.6

On the strength of the above table we may safely remark that persons below Rs. 2,000 as their annual income are also below average in Personality Adjustment. We may describe these people as people with lower economic status. Persons from Rs. 2,000 to Rs. 12,000 as their annual income are equally adjusted; and are just at the average in their personality adjustment score. We may describe these people as middle class people. Persons above Rs. 12,000 as their annual income may be described as well-to do persons, are better adjusted and are much above average. We may say that one's economic status has a direct influence on his personality adjustment and persons with higher economic status are likely to be better adjusted than persons with lower economic status

The table below shows the influence of the changes in economic status during one's life on his personality adjustment. Economic status may either show a 'gradual increase,' a 'gradual decrease,' remain 'constant' or show 'ups and downs' during, one's life time. It is a study of personality adjustment under these changes, that is shown in Table 6.

TABLE 6

Mean Scores and Standard Deviations on the basis of changes in economic status

	N.	Mean	S.D.
Gradual increase	59	82.1	13 8
Gradual decrease		74.4	10.5
Constant	38	79.7	16.6
Ups and Downs	9	71.6	13.5

Table 6 gives a fair exposition of the favourable influence of an increase in economic status on one's personality adjustment. Depression and irregularities in economic status have shown an unfavourable influence on personality adjustment.

On the basis of their position among the siblings, our subjects have been classified into those who are 'eldest,' those who are 'youngest,' those who are 'only children' of their parents, and 'others.' Table 7 makes a comparative study of personality adjustment on this basis.

TABLE 7

Mean Scores and Standard Deviations on the basis of position among the siblings

	N.	Mean	S.D.
Eldest	45	79.4	13.7
Youngest	19	79.8	15.1
Only Children	4	72.3	9.3
Others	52	82 2	14.6

Eldests and Youngests appear to be equally adjusted. Those who are in the middle (Others) show a slightly better adjustment. Average score of adjustment among the Only Children is considerably low but their population is too small to draw any conclusion about them.

We have further found the mean score of adjustment of those who are *only brothers among their sisters*. There were 14 such persons and their average score has been 93.2; S.D. 9.6. These people show a slightly better adjustment than the entire population of subjects taken as a whole, where the average score of personality adjustment has been 80.66; S.D. 14.13 (Please refer to Table 2).

The Psycho-social Questionnaire about Attitude towards Marriage.

Inter-caste and in-caste Marriages:

Question—Do inter-caste marriages bring greater happiness than in-caste marriages?

ALWAYS MOSTLY SELDOM NEVER

An analysis of the answers to this question appears in Table 8.

TABLE 8

An analysis of answers on inter-caste and in-caste marriages.

	Always	Mostly	Seldom	Never	Total
Total number of answers	10	27	68	15	120
% of total answers	8.33%	22.5%	56.67%	12.5%	
Married					
Number of answerrs	6	3	24	7	40
% of answers	15%	7.5%	60%	17.5%	
Unmarried					
Number of answers	4	24	44	8	80
% of answers	5%	30%	55%	10%	
Seniors (postgraduates)					
Number of answers	4	16	33	6	59
Juniors (undergraduates)					
Number of answers	6	11	35	9	61

We find most of the answers come under 'Seldom' and 'Mostly'; and only a few persons have answered in 'Always' and 'Never'. We think that most of the people have certain opinion about the problem, but are not definite of it.

It appears from the analysis in Table 8 that there is an influence of marriage, and not of education, in answers to this problem.

Choice of a Marriage Partner:

Question—In choice of a marriage-partner whose advice is safer to follow?

FATHER'S MOTHER'S FRIEND'S NOBODY'S

Answers to this question appear in Table 9 in order of preference.

TABLE 9

Preference in advice regarding the choice of a marriage-partner.

Nobody's	57	47.50%
Father's	34	28.33%
Mother's	15	12.50%
Friend's	14	11.67%

The majority, we see, votes for 'Nobody'. The proportion of answers in various alternatives has been the same in married as well as in unmarried people, and in Seniors as well as in Juniors.

The Chi-square value of answers is 40.86, which proves that the choices considered in this problem indicate statistically very significant trends at 0.01 level.

House-Keeping and General Marital Happiness:

Question—Your wife could learn a lot about house-keeping and general marital happiness from your:

MOTHER SISTER NONE

Ninety-six people answered in favour of 'Mother', seventeen answered in favour of 'Sister' and seven people answered 'None'. There is a significant tendency in favour of mother. Of the 17 persons responding sister, 5 have no mothers, and of the 7 persons responding 'none' two have no mothers and no sisters. We assume that some of the answers in 'sister' and 'none' are given because of the absence of mother, which might not have possibly be given had the mothers of the subjects concerned been present.

An interesting point has been observed here. Though 80% of the subjects feel that their wives could learn about house-keeping and general marital happiness from their mothers, still there are only 12.5% people who prefer mother's advice in choice of a marriage-partner. (Please refer to the previous question).

Married Women and Careers:

Question—Should married women have careers?

YES NO

There has been a controversy on the problem, but the majority favours married women having careers. Sixty-nine persons vote in favour of the problem, while fifty-one are opposed to the idea of married women having careers. The answers to this problem do not appear to have been influenced either by marital status, education or age.

The Chi-square value of the choices considered is 2.7 and is significant at 0.01 level.

Private Allowance for Married Women:

Question—For married happiness should women have a regular private allowance?

YES NO

This question also has been subject to considerable controversy. Sixty-one people favour regular private allowance for married women; while fifty-nine people oppose the idea. Table 10 below gives the frequency of responses on the basis of marital status and education.

TABLE 10.

Frequency of responses regarding private allowance for married women.

	Yes	No
Married	17	23
Unmarried	44	36
Seniors	36	23
Juniors	25	36

The figures show that a majority of married people are opposed to the idea of private allowance for women, while a majority of the unmarried people are in favour of it. Similarly a majority of the Seniors is in favour of the question into consideration, but most of the Juniors are against it.

An interesting observation has been made. Sixty-nine people are in favour of married women having careers, with regard to the problem which we have just gone through. Out of those 69 people, only 35 people here, are in favour of private allowances for married women. This suggests that some people have answered these questions more emotionally and less consistently.

Divorce:

Question—Should married partners have the option of divorce.

YES NO

This is again a controversial problem. We have 58 supporters and 62 opponents of the cause of divorce. A classification of responses on the basis of marital status, education and age appears in Table 11.

TABLE 11.

An analysis of responses on the problem of divorce.

	Yes	No	
Married	15	25	= 40
Unmarried	43	37	= 80
Seniors (post-graduates)	34	25	= 59
Juniors (under-graduates)	24	37	= 61
Elders (above 20.6 years)	27	27	= 54
Youngers (upto 20.6 years)	31	35	= 66

There appears to be the influence of marital status and education on peoples' attitude towards this problem. A majority of unmarried people and Seniors approve divorce, while most of the married people and Juniors do not favour it. There appears to be no influence of age.

Dowry:

Question—From your in-laws would you like or have liked to get as dowry?

MAXIMUM MINIMUM NOTHING

Ninety-five persons answer 'Nothing' to this question. Twenty-three people are not totally against dowry but appear to be partly in favour of dowry—they answer 'Minimum'. Persons wanting

maximum dowry are only two. There still exist people who like to take maximum dowry from their in-laws but their number is quite meagre. A majority of youngmen are definitely opposed to dowry.

Jewellery:

Question—Would you like to present your wife with jewellery that is:

COSTLY CHEAP ATTRACTIVE

The most interesting feature with the answers to this question has been that some of our subjects did not like to answer in any of the suggested alternatives, and have written 'Nothing' as their answers. These people may be called extremists and are definitely opposed to all kinds of jewellery.

Twenty-three of our subjects like to present their wives with costly jewellery, thirteen with cheap, sixty-five with attractive and nineteen do not want to present jewellery at all. Presentation of 'Attractive' jewellery appears to be the attitude of many.

We tried to find whether one's economic status has any bearing on his answer to this question. Answers do not show any influence of economic status, but show a general mental attitude of the subjects towards the problem of jewellery.

SUGGESTIONS FOR EXPERIMENTAL STUDY OF INDIAN MUSIC

M. GANGULY (*Calcutta*)

The basic fact of Indian music is its melody. The simple aspects of harmony, which are also present, are only of secondary importance. The principle of harmony (consonance and dissonance) is generally utilised for the appreciation and reference of fundamental note and other specific tones which are of value in the enrichment of the specific melody.

The other factors used are the staccato, the legato, the meeda epressing the sruti (that is difference of less than a semi-tone) as well as the *gamakas*, and the tonal fusions. These seem to be the principal characteristics.

We may begin our experimental study with the nature (percentage) of tonal fusions of the fundamental with the next higher or lower octave tones ('tara' or 'udara'—the eighth note) as well as with the fifth note, the fourth note, the third note, etc. The percentage of fusions may reasonably be expected to be approximately closer to 90%, 60%, 50% and less respectively. These of course require experimental confirmation.

The next step seems to be the determination by the introspective method of the maximum length of the temporal interval which must intervene or may be allowed to make the perception of two successive notes as continuous, that is, as creating an impression of belonging to the same (unit) configuration or gestalt and not disjoined or separate. The subjective impressions of *gamaka* and *meeda*, etc., and the introspection of the accompanying affective processes will reveal individual variations and are complicated phenomena. They may be left out in a preliminary study. The third step is to investigate by the introspective method the so called music syllables or the simple tonal units composed of two, three or more tones which are suitable in expressing a raga. Statistical treatment of introspective data collected under standard experimental conditions should indicate the nature of the influence. My own views are recorded here. It seems to me that two tones do not form an unit, three tones form a suitable unitary syllable which can express a specific raga, when used in a specific manner. The cases of four or five

tone units seem to be more complicated than a simple music syllable in expressing a full raga. We may reasonably infer that four or five tonal compositions are independent ragas rather than simple units.

The fourth procedure is to investigate the principal types of ragas which are very dissimilar to each other and gradually to find out the effects of the ragas on the subjects by the different methods of expression. The following types of laboratory study may be suggested :—

(*a*) Effect of the different ragas used as stimuli on the pneumogram of the subject. The specific phases of the curve are studied, tabulated and compared with the pneumogram obtained under normal conditions.

(*b*) Effect of the ragas on the plethysmographic (body volume) records of the subject. The records are to be compared with similar records under non-affective (normal) mental state. The introspection of the subject shall be recorded regarding the nature of the affective state.

The fifth step is the physiological method, namely, finding out the changes, simple or complicated, in the composition of the hormonic fluid of the body and the investigator is to search out a suitable method for studying the chemical or other changes in the blood, etc. In order to begin this sort of research work it may be mentioned that estimation of chemicals in the blood (*e.g.*, blood-sugar etc.) or other qualitative changes in the character of the blood may be taken up first. The measurement of blood pressure of the subject under normal and affective conditions and studying and comparing the specific effect might also be undertaken.

The final stages of investigation may at present be supposed to be the laboratory record with the help of a psychogalvanic apparatus of the nerve resistances under normal psychological condition compared with the resistances under affective mental states. If the table of data shows a marked difference in the values of nerve resistances reasonable inference may be drawn as to the probability of the development of specific psychological states in consciousness. The theoretic aspect of the experiment is that different affective psychological states in consciousness produce changes in the nerve resistance of the subject ; hence indication from the table as to the different nerve resistance values collected under different affective psychological states may create a reasonable presumption of a difference in the appreciation of the affective psychological stimulus-

situation by the subject. It is presumed however that there is no change in the path or course of the galvanic current through the relay of nerves though some doubts have been expressed regarding the constancy of the path of the galvanic current. The general tendency is to accept the probability of the constancy of the nerve path because there is no crucial experimental evidence to the contrary. On the same basis of inference if the table of data shows significant differences in the nerve resistance values under different melody-situations there is a reasonable conclusion that the individual is physiologically affected in a different measure or manner when the subject is influenced by different ragas. So it can be shown from experiments that there is a tangible concomitant or correlated physiological basis for the classification of ragas and the nomenclature of the ragas is principally based on concrete body-condition than on mere complicated, unanalysable and difficult speculative introspection. It must be admitted here that introspection is a psychological fact but when the introspection is very vague and owing to complications, resists analysis it may be argued that the introspection or rather retrospection is of doubtful value and is similar to speculative or imaginative process. The psychogalvanic experiment may be carried on two types of subjects, namely, (*i*) the layman type,—those who have no interest for and do not appreciate *ragas* (music), and (*ii*) the specific type, music-experts who have interest and appreciation for music.

The basic concept involved here is that the development of a physiological process in the cortex due to simple or complicated affective stimulus-situations and of the corresponding (concomitant or correlated) electric brain-disturbances. These can at present stages of technical knowledge be recorded objectively as tangible curves of "brain-waves" by the electro-encephalograph apparatus. The curves obtained may be studied and compared with the "brain-waves" obtained under standard normal mental state.

It is to be noted that this type of very useful and latest form of investigation is to be conducted and the electro-encephalographic tests should be applied on the two different types of subjects mentioned before with proper amplification and the corresponding brain-waves recorded and suitably shuffled. The typical cephalograms tabulated and classified should give a concrete and tangible clue to the standard method of classification of *ragas* prevalent from old times. It may be pointed out that the influence of language may, at the first stage of experiment, be eliminated with advantage. The

influence of rhythm as also of language may gradually be inserted in the experimental series with suitable control, if necessary, by the investigator conducting the whole series of experiment.

In this short paper an effort has been made to put down my angle of vision and to indicate the techniques of tackling the problems of Indian music from the scientific standpoint. The experiments suggested above, if carried out, will throw a much needed light on the obscurities of Indian music.

IMPORTANCE OF AGE OF ONSET AND SEX IN THE AETIOLOGY OF PSYCHOSES

By Dhirendra Nath Nandi, Tapan Basu Mallik, Samir Bose (*Calcutta*)

Introduction.

Inspite of the rapid progress made in psychiatry and other branches of mental science, we have gained very little definite knowledge about the aetiology of the psychoses. But, at least, this has been admitted without doubt that a certain mental illness can, by no means, be ascribed to a single factor or even to some discrete unrelated ones ; it depends upon a constellation of factors, inherent and environmental, which enter all together into the causation of the disease. A psychosis is never an abrupt occurrence coming out of the vacuum, but is the end-product of an active chain of multifarious factors, known and unknown. A mentally deranged person is likely to have a mind predisposed to aberrations, has had the chance to encounter with the precipitating factors ; the disease has its period of incubation and finally its emergence as a disruption into the integration of the personality. This consideration naturally demands that the aetiology of a psychosis should always be sought both in the hereditary and environmental factors influencing the individual concerned. Hence, an investigation into the aetiology of a mental disease should necessarily take into account all these important factors, *viz.*, heredity, sex, age, environment, etc. ; and their importance in the course and prognosis of the disease has also to be evaluated.

This paper for the present concerns only with the importance of age of onset and of sex-difference in the aetiology of various types of psychotic illnesses, leaving aside the other factors to be dealt with by the authors in subsequent papers.

Work carried out in this direction is meagre. Results, so far obtained, as noted in the Text Book by Henderson and Gillespie (1947) indicate that most of the schizophrenic cases occur between the fifteenth and the thirtieth year while the peak is attained at about the twentyfifth year. Majority of cases starts at puberty and adolescence, while occurrences of psychoses are usually rare in later life.

Kraepelin furnishes a physiological basis for the mental disorders. He holds that a mental illness results from an auto-intoxication

produced by the disordered secretion of the sex glands. Hence, mental symptoms are frequent at puberty, pregnancy, child birth, and in time of menopause, because disorders of metabolism occur more readily in these periods due to the disordered secretion of the sex glands.

Kant (1948) in his study of simple schizophrenia observes the age of onset to be lying between twelve and twentynine years. In slightly more than two-thirds of his cases the age of onset falls in the period between the seventeenth and the twentyfourth year.

Curran and Guttmann (1944) hold that simple and hebephrenic types of schizophrenia usually begin at late puberty. The catatonic group begins somewhat later, the majority being between the years twenty and thirtyfive. Majority of paranoid cases starts in the fourth decade. Regarding the affective psychoses, cases of classical recurrent type usually start between the twentyfifth and the fortieth year.

METHODS

The present investigation was carried out at the Lumbini Park Mental Hospital on two thousand patients. Case histories were collected from the relatives of the patients during the first examination at the time of patients' admission into the Hospital. Cases, where details regarding the mode of onset, past histories, family histories, etc., were lacking at the first interview, were collected from subsequent interviews with the patients' relatives.

For the present investigation the following classification of mental diseases has been adopted :

- Psychoses
  - Affective Psychoses
    - M. D. P.
    - Mania
    - Depression
  - Schizophrenia
    - Paranoid
    - Non-paranoid
      - Simple
      - Hebephrenic
      - Catatonic
  - Paranoia

Psychoses of toxic, infective, traumatic or metabolic origin except G.P.I. have not been taken into account. Epileptic psychosis is also excluded from consideration for the present.

Psychoses occurring at different epochs of life, *e.g.*, puberty, adolescence, menstruation, pregnancy, puerperium and climacterium (both male and female, have not been classified according to the different periods at which they occur, but have been included under the different heads of the above classification according to the symptoms they exhibit.

MATERIALS

Of the 2,000 cases studied 1,286 were psychotics, 851 cases being male and 435 female. According to the classification followed in this investigation 541 were found to be cases of non-paranoid schizophrenia, 481 of paranoid schizophrenia, 75 of paranoia, 175 of affective psychoses and 14 of G.P.I.

Grouped data showing the distribution of age of onset of the disease and of sex in different types of psychoses are to be found from the table below (Table I).

DISCUSSION.

From the results (Tables II and III) it appears that majority of cases of psychotic illness starts between the fifteenth and the twentyninth year. The maximum number of incidence, of course, lies between the age group twenty and twentyfour. This age group is certainly post-pubertal and hence, the usual age of onset does not correspond with the period of pubertal changes as Kraepelin holds on the basis of gonadal disfunctions. No doubt, physical factors, *viz.*, endocrinal and other changes are responsible in a number of cases of mental disease but to hold this as the only explanation is something not corroborated by facts. On the contrary, if we shift our attention from the physiological to the psychological aspects of the aetiology of psychoses, it becomes evident that this is the period of life when most people have to face the stern reality with all possible successes and frustrations. This period (15—29 years) seems to be the most strenuous of all ages, since at this period personality has got to bear the maximum psychological strain. A sound mental life depends upon a harmonious relation between the self (ego) and the environment (reality) and a mental disease develops due to the lack of adaptibility of the ego to the environment under strenuous circumstances. The problem of adaptation becomes more acute owing to the increasing chance of frustrations which relatively highly ambitious persons experience under the present social and economic conditions. It is a common observation that mental illnesses, except those of organic origin, are more prevalent among the educated people. Of course, psychical stresses do not always originate from the thwarted ambitions of higher nature ; other usual sources of mental strain include the problems of academic and other achievements, of marriage, employment, social relations, etc. But the importance of these sources of psychological stresses in the aetiology of psychoses has not yet been properly traced out.

TABLE 1

Age Groups in years	Non-paranoid Schizophrenia.		Paranoid Schizophrenia.		M.D.P.		Depression		Mania.		G.P.I.	Total Non-paranoid Schizophrenia.	Total paranoid Schizophrenia.	Parancia.		Total paranoia.	Total M.D.P.	Total Depression	Total Mania.	Total Affective Group.	Total G.P.I.	Total Psychotics		Total Psychotics	Grand Total.
	M	F	M	F	M	F	M	F	M	F	M			M	F							M	F		
Below-9	6	4	1	0	1	1	0	0	0	0	0	10	1	0	0	0	2	0	0	2	0	8	5	13
10-14	31	24	8	5	3	2	1	0	0	1	0	55	13	0	0	0	5	1	1	7	0	43	32	75
15-19	74	48	49	18	5	4	6	1	0	0	0	122	67	0	0	0	9	7	0	16	0	134	71	20
20-24	89	49	97	37	5	9	16	5	2	2	0	129	134	2	2	4	14	21	4	39	0	202	104	306
25-29	61	36	82	17	7	2	13	3	2	1	0	97	99	6	5	11	9	16	3	28	0	171	64	235
30-34	37	21	54	19	8	2	9	4	0	0	3	58	73	8	12	20	10	13	0	23	3	119	58	177
35-39	20	18	22	13	1	3	7	8	0	1	3	38	35	8	7	15	4	15	1	20	3	61	50	111
40-44	7	7	18	8	4	0	8	2	0	0	3	14	26	4	6	10	4	10	0	14	3	44	23	67
45-49	5	5	8	5	5	0	3	3	0	0	3	10	13	5	2	7	5	6	0	11	3	29	15	44
50-54	3	3	7	2	2	0	2	0	1	0	2	6	9	4	2	6	2	2	1	5	2	21	7	28
55-Up.	2	0	8	3	1	0	6	3	0	0	0	2	11	2	0	2	1	9	0	10	0	19	6	25
	326	215	354	127	42	23	71	29	5	5	14	541	481	39	36	75	65	100	10	175	14	851	435	1286

M—Male, F--Female.

TABLE II

Showing distribution of total Psychotics at different age-groups

Age-groups (in years)	No. of cases	Cases in %
Below—9	13	1.0
10—14	75	5.8
15—19	205	16.0
20—24	306	23.8
25 - 29	235	18.2
30—34	177	13.8
35—39	111	8.6
40—44	67	5.2
45—49	44	3.4
50—54	28	2.2
55—up	25	2.0
Total	1,286	100.0%

TABLE III

Showing sex-distribution of total psychotics at different age-groups

Age-groups (in years)	Male		Female	
	No. of cases	Cases in %	No. of cases	Cases in %
Below—9	8	0,9	5	1.1
10—14	43	5.0	32	7.4
15—19	134	15.8	71	16.3
20—24	202	23 7	104	23.9
25 - 29	171	20.1	64	14.7
30—34	119	14.0	58	13.3
35—39	61	7.2	50	11.5
40—44	44	5.2	23	5.4
45—49	29	3.4	15	3.4
50—54	21	2.5	7	1.6
55—up	19	2.2	6	1.4
Total ...	851	100.0%	435	100.0%

TABLE IV

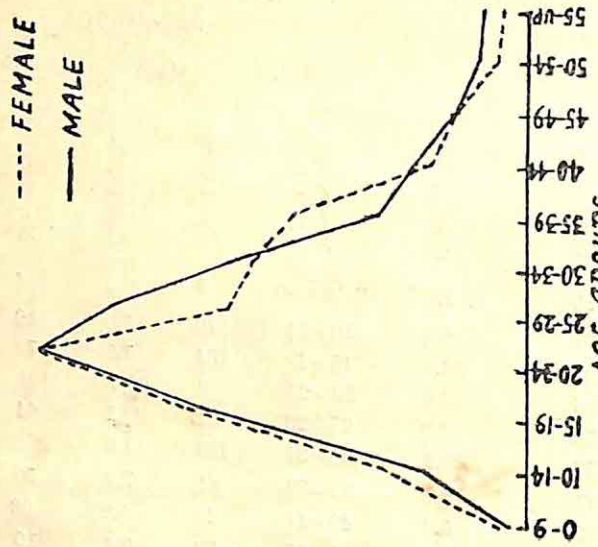
Showing distribution of total psychotics of affective group in % at different age groups

Age-groups (in years)	% of total M.D.P.	% of total Depressives	% of total Maniacs	% of total Affect. group
Below—9	3.0	0.0	0.0	1.0
10—14	7.6	1.0	10.0	6.2
15—19	13.5	7.0	0.0	6.8
20—24	21.4	21.0	40.0	27.5
25—29	13.7	16.0	30.0	19.9
30—34	16.3	13 0	0.0	9.8
35 - 39	6.2	15.0	10.0	10.4
40—44	6.2	10.0	0.0	5.4
45—49	7.6	6.0	0.0	4.5
50—54	3.0	2.0	10.0	5.0
55—up	1.5	9.0	0.0	3.5
Total	100.0%	100.0%	100.0%	100.0%

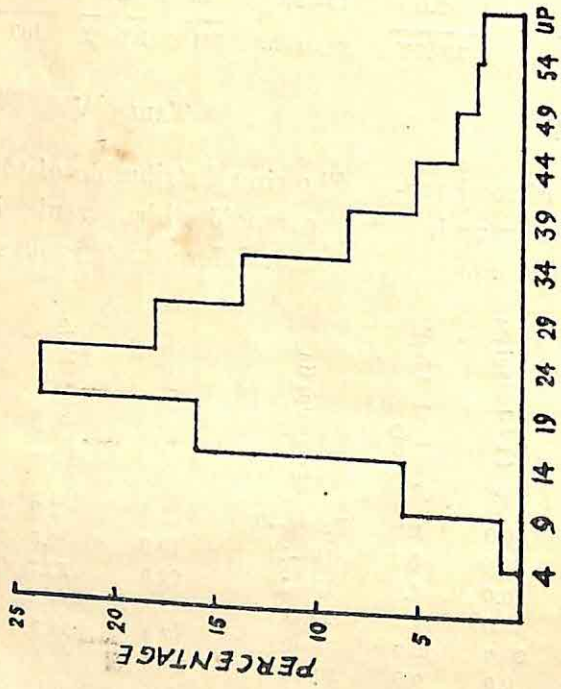
TABLE V

Showing distribution of total non-paranoid schizophrenics in % at different age groups

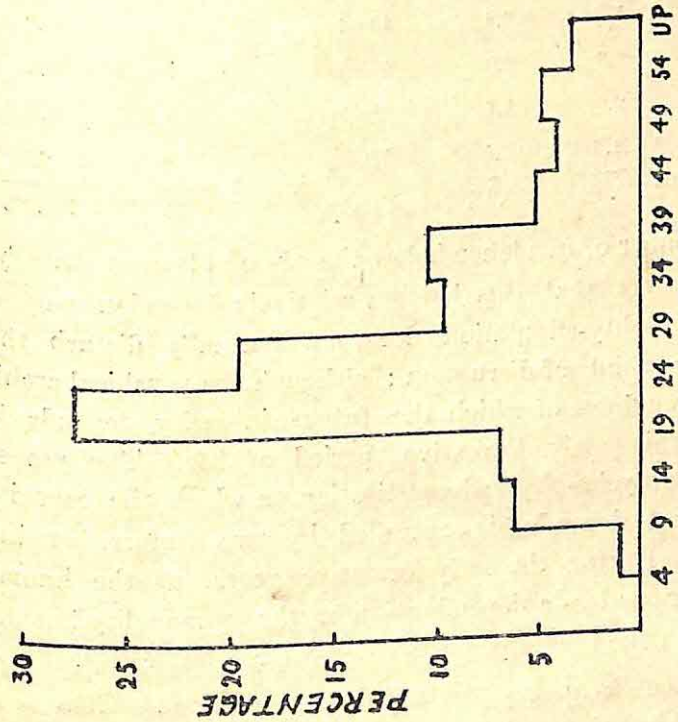
Age-groups (in years)	% of total cases	% of total Male cases	% of total Female cases
Below—9	1.8	1 9	1.9
10—14	10.2	9.5	11.7
15—19	22.6	22.7	22.3
20—24	23.8	24.5	22.8
25—29	17.9	18.7	16.8
30—34	10.7	11.4	9 0
35—39	7.0	6.1	8.4
40—44	2.6	2.2	3.3
45—49	1.9	1.5	2.4
50—54	1.1	0.9	1.4
55—up	0.4	0.6	0.0
Total	100.0%	100.0%	100.0%



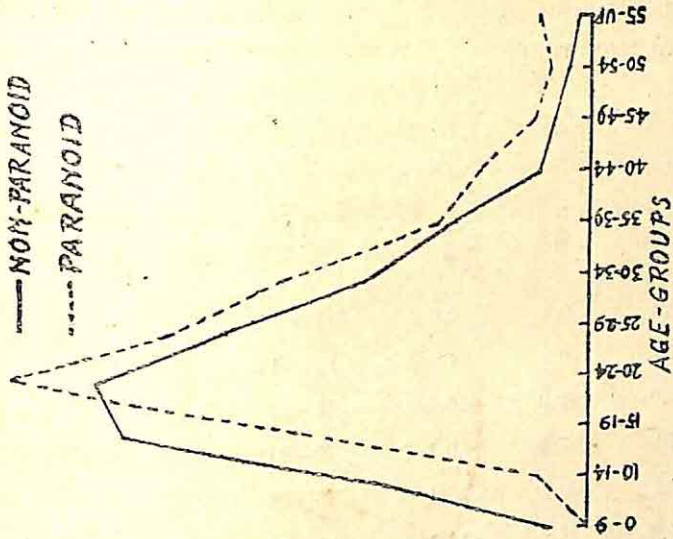
GRAPH II
SHOWING SEX-DISTRIBUTION OF TOTAL PSYCHOTICS



GRAPH I
SHOWING DISTRIBUTION OF TOTAL PSYCHOTICS



GRAPH III
SHOWING DISTRIBUTION OF
TOTAL AFFECTIVE PSYCHOTICS



GRAPH IV
SHOWING DISTRIBUTION OF
TOTAL SCHIZOPHRENICS

TABLE VI.

Showing distribution of total paranoid schizophrenics in % at different age groups

Age groups (in years)	% of total cases	% of total Male cases	% of total Female cases
Below--9	0.2	0.3	0.0
10—14	2.7	2.3	4.0
15—19	13.9	13.9	13.5
20—24	27.8	27.4	29.1
25—29	20.6	23.1	13.4
30—34	15.2	15.2	15 1
35—39	7.3	6.2	10.3
40—44	5.4	5.0	6.4
45—49	2.7	2.3	4.0
50—54	1.9	2.0	1.7
55—up	2.3	2.3	2.5
Total	100.0%	100.0%	100.0%

TABLE VII.

Showing distribution of paranoiacs in % at different age groups

Age-groups (in years)	No. of cases	Cases in %
Below—9	0	0 0
10—14	0	0.0
15—19	0	0.0
20—24	4	5.3
25—29	11	14.7
30—34	20	26.7
35—39	15	20.0
40—44	10	13.3
45—49	7	9.3
50—54	6	8.0
55—up	2	2.7
Total	75	100.0%

The lesser number of incidence below the age of 14 years may be explained by the fact that this being a relatively dependent part of life the problem of reality-adaptation does not normally disturb the personality to the point of disruption ; although the psychical architecture upon the soundness of which the future integrity depends is built up during this early formative period of life. The proper development of the psycho-physical constitution on which the capacity of reality adjustment depends, is controlled by two factors, heredity and environment. During the early formative years, as the human organism leads more or less a dependent life, the personality has not to suffer much from the pressure of the adverse forces of reality.

The diminished frequency of occurrences as found from our data, from the thirtieth year onward, may be due to the fact that within this period of life the ego has settled down in a particular attitude to the reality to run the mental life with the least possible chances of frustrations. It is also evident from our results that the incidence of mental illnesses after the fourth decade is rare. The

reason for this is probably that environment is not able to bring alterations any more to the attitude of the ego which has already adjusted itself to the world. But, of course, with the advancement of age senile changes take plaee in the physiology of the organism, particularly in the neuroendocrinal system, which are certainly responsible in a number of cases of organic mental disorders.

The peak of occurrences both in the non-paranoid and paranoid types of schizophrenia is found to lie in the same age group, 20-24 years. Although both the groups have the maximum frequency at the same age group, the distribution of occurrences on either side of the above age group (20-24 yrs.) is different in the two groups. Below the age group, 20-24 yrs. the percentage of occurrence is seen to be higher in the non-paranoid group than that of the paranoid (non-paranoid 36.4%, paranoid 16%). On the other hand, the percentage of incidence above the age group, 20-24 yrs, in the paranoid group is greater than that of the other group (paranoid 55.4%, non-paranoid 41.6%). It seems then that paranoid schizophrenia has a greater tendency to occur in comparatively late years than non-paranoid schizophrenia. This discrepancy may be explained by the fact that a paranoid ego is much more integrated than the non-paranoid one and it offers greater resistance to the disrupting forces of the personality. This fact has been substantiated by Levy and Southcombe (1952) who have shown that in schizophrenics a lesser degree of mental deterioration occurs in the group where the age of onset is between 19-45 yrs. than in the cases where the age of onset lies on either side of the avove age group. It is also observed that mental deterioration is lesser in cases of paranoia and paranoid schizophrenia than in cases of nonparanoid schizophrenia.

We have rather a relatively small number of cases of paranoia (75). This is likely to be due to the facts that fewer number of paranoiacs is brought to the Hospital as there is only a partial deterioration of their mental faculties which is seldom seriously considered by their relatives and that certain types of paranoiacs can somehow manage their business in a more or less limited field.

The distribution of occurrences in cases of paranoia follows almost the same line as in cases of paranoid schizophrenia. Paranoia seems to occur in still later years which indicates a much more integrety of the ego and only a partial breakdown of the mental faculty (since, except in certain particular directions the mental activities remain almost normal) owing to a stiffer resisting capacity of the personality.

In the affective group of psychoses the distribution of age of onset is more or less limited (Table IV), the majority of cases clustering within a shorter range, 20-29 yrs. than in schizophrenia where the age of onset is more evenly distributed between 15-29 yrs. The peak is, of course, attained in the age group, 20-24. In cases of depression the female climacteric period (40-45 yrs.) dees not show any increased frequency, although the involutional period of male (55—up) shows a somewhat greater frequency. However, the number of cases is so small in the affective group that the reliability of these distributions can not be confirmed.

When we come to consider the significance of sex-difference in the causation of psychoses certain points become conspicuous from our data. It is found from Table III. that there is an increase in the occurrence at the age group, 10-14 and again at 35-49 in cases of female psychotics as a whole than in cases of male psychotics. The increased incidence of mental illness in teen-aged females may probably be due to the fact that sexual maturity comes earlier in girls than in boys. This early sexual maturity brings with it certain peculiar problems which oftem prove to be very strenuous to the personality. In India girls often face another vital problem within their teens. In many cases girls get married at an early age. With an early marriage the problem of adaptation to a new family environment becomes prominent apart from the question of marriage itself, which places some strains on the ego. These psychological stresses during early years peculiar to the females may naturally cause disruption to the normal ego-reality relation ultimately resulting in a mental illness. The increased frequency at the age group, 35-49, may also be ascribed to the system of our social institution. There is a general prohibition in our country (now of course, on the decline) against widow marriage which thus debars a widow from fully meeting her sexual needs. Moreover, restrictions, are imposed on her social freedom. This restriction in social freedom becomes most torturing due to the existence of the joint family system which prohibits a woman in most cases to become the mistress in her own house even. On the other hand, it is seen from our results that there has been a drop in the frequency of occurrence at the age group, 25-29, in the females in comparison with that of the males of the same age group (Table III). The reason for this may possibly be that at or before this period most of the girls in our country get married and settled down; the problem of family adjustment thus takes a shape. Moreover, the economic dependence of women in

this country does not usually stress a girl with the problems of employ ment and earning, which in the cases of men are the chief sources of mental stress.

When schizophrenics are concerned it becomes evident that they also follow the same line as in cases of psychotics taken in general (Tables V & VI).

But the relative frequency of incidence of mental illnesses in the two sexes is difficult to assess; since the number of female beds in the Hospital is about half the male beds Moreover, the male patients being the earning members are brought more frequently for treatment than the females.

In our study only 14 cases of G.P.I. have been recorded, all of which are males; and the age of onset of their disease as given in the Table I. is found to lie between 30-34 years. The number of cases is so small that valid comment is difficult to make on the age and sex factors. But one thing is clear from our data that G.P.I. cases are rather rare.

The role of age and sex in the aetiology of psychoses is not easy to ascertain. Possibly these have an indirect bearing on the causation of mental disorders. In the present paper we have been led by the data to assume that certain psychological stresses, unique to certain ages and sometimes dependent on the sex-difference, are likely to be the contributing factors for the causation of psychoses. But how far they are actually responsible and in what way are yet to be assessed, for which systematic work is already in hand.

ACKNOWLEDGEMENT

We are indebted to Dr. N.De, M.B., D.T.M. (Cal), M.R.C.P. (Edin.), D.P.M. (Lond.), Senior Visiting Physician, Neurology & Psychiatry, Medical College, Calcutta and to Prof. S.C. Mitra, M.A., D.Phil. (Leip.), F.N.I., Head of the Psychology Department, Calcutta University, for their valued suggestions in course of our work. Our thanks are also due to the Superintendent, Lumbini Park, for giving us necessary facilities to carry on work in the Hospital and allowing us to publish the materials collected therefrom. His comments, too, had been invaluable.

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ILLUSION OF DIRECTION IN APPARENT MOVEMENT PERCEPTION

By

Nisith Ranjan Chatterjee, (Calcutta)

Experiments on apparent movement are not new. In universities of different countries the psychologists have conducted and are still conducting experimental studies of this phenomenon in different methods. The results which are published in various psychological Journals are interesting and show that their applications have much practical importance. In fact the application of the techniques and results of the apparent movement is assuming more and more prominence in modern civilization, *e.g.* in motion pictures, light advertisements etc.

The present paper embodies the results of some experiments carried out by the author by adopting a completely new method. The study was conducted in the laboratory of Applied Section, Department of Psychology, University of Calcutta.

For our present purposes it is not necessary to survey all the experiments conducted by the psychologist in different universities which have already been published in the psychological journals.

Author's Problem of Investigation

In certain motion pictures an illusion of direction of a moving object frequently occures though the photographer as well as the observer do not want this. If a wheel of a cart rotates in motion picture, a peculiar phenomenon regarding the direction of rotating wheel happens. The observer perceives that the direction of the rotating wheel changes along with the speed of the rotating wheel though the wheel rotates in the same direction all the time and the speed of the camera during the time of photagraphy and the speed of the projector remain constant. Similarly, let a series of uniform black stripes situated at equal distance from one another be moved uniformly sidewise in different speeds and let them be photographed in motion picture. If now the film be projected on the screen after being developed the directions of the movement of the stripes changes

with the speed of the moving stripes, though the speed of the camera and the projector remains constant. By the speed of the camera is meant the number of pictures photographed per second and the speed of the projector is meant the number of picture projected per second. By increasing or decreasing the number of pictures per second we see the slow motion, normal motion (actual), or fast motion picture of a moving objsct by keeping constant the speed of the number of pictures projected per second by the projector.

APPARATUS DESIGNED

In order to study this peculiar illusion of direction of movement a moving object in the apparent movement an apparatus is designed by the author which is very simple and can be prepeared in any psychological laboratory. The apparatus consists of an electric kymograph whose speed can be regulated and measured. An electric motor connected with regulator is also used as an aperture. By the help of the regulator the speed of the electric motor is controlled. The R. P. M. of the electric motor is measured by an electrical adjustment of the counter with the spindle of the motor. One circular cardboard (12″ dia) having an aperture (3′ × 2″) is fitted with the spindle of the electric motor. There were six steps in the regulator. By changing the steps the speed of the electric motor may be made to vary from very high to slow. The number of rotation per second of the motor in each step is calculated by the counter which is electrically fitted to the motor. The stimuli figures were of three types namely A, B & C, but they were same in nature *i.e.* they consisted of black strips (20mm × 5mm) placed vertically along the same plane on drum papers (set A, B & C) and the back ground was white.

PLAN OF WORK

The investigations chiefly centered around a number of issues stated below :—

1. What is the effect of the speed of the moving object so far as its direction is concerned in apparent movement?

2. What is the effect of the visual interruption so far as the direction of moving object in apparent movement is concerned?

3. What is the effect of the distance in between the two successive objects in the direction of apparent movement is concerned?

4. What is the effect of attitude and eye movement so far as the direction of apparent movement of a moving object is concerned?

5. Is there any individual difference so far as the R. L. of direction of a moving object in apparent movement is concerned?

6. What condition is needed in order to perceive real direction of the moving object in apparent movement perception?

Procedure

The Kymograph fitted with figured drum paper was placed in front of the subject (30 cm. apart). The electric motor fitted with cardboard aperture was placed 15 cm apart in front of the subject in such a manner that the subject could see the figures only through the aperture. A screen having an opening in the middle were placed in front of the drum paper in order to cover the other unwanted portion of the drum. Through the opening of the screen only 10 figures could be seen at a time in case of set A, 5 fignres in case of set B and 3 figures of set C.

Four subjects were experimented upon separately. The subjects were postgraduate students of the Psychology Department. Out of four one subject had defective vision. All were supplied with a form and were tought about the signs to be used to describe different kinds of speed, number of figures and direction of the movement of the figures.

Instructions to the Subject

"Pay attention to the experiment. Close your eyes, look carefully to the figures when I say 'now' mark what is happening to the figures, give your introspective report by noting the respective signs on the form. Stop when I ask you to do so. Proceed thus with every 'now' signal, if you note any pecularity please inform me at once. Is there anything to ask?"

When the subjects were understood the instructions and were trained by giving some practice experiments, the final resuits were taken. During the variation of the speed, special precautions were taken so that they did not become aware about the change of speed either of stimulus or of the aperture.

FINDINGS

By studing the results given by the four subjects the following tentative conclusions may be drawn :—

1. With regard to the first issue : When the period of visual interruption is constant, the direction of the apparent movement changes with the change of speed of the moving objects. There is no one to one relation between the speed of the apparent movement and the actual speed of the moving objects. The apparent movement may be slower or faster than the speed of the moving objects. This change always happened during the change of direction. It was noted when the speed of the apparent movement slowed down, in certain speed of the moving objects, the objects seamed to be stationary, and then by further change of speed of the moving objects, change of direction was perceived in apparent movement. It was further noted that nearer the stationary points slower was the speed of the apparent movement irrespective of the direction of movement. But, when by changing the speed of the moving objects the speed of the apparent movent increased, flicker always appeared at the threshold of the change of direction.

2. With regard to the second issue : The direction of the moving objects also changes with the changing of the visual interruption period where the speed of the moving objects remain constant. At the threshold where the direction changed similar results were found as stated under the first issue. Further, when the speed of the moving objects was slow and the interruption period was very small i.e., the electric motor fitted with the aperture rotates with a high speed, the positive after images of the objects were observed by the subjects. The number of positive after images increased as the speed of the moving objects slowed down or the speed of the interruption aperture increased.

3. With regard to the third issue : The direction changes with the change of the distance between the two successive objects. Shorter the distance, better the dirrection of the apparent movement and longer the distance greater the positive after images. But it should be noted that if the distance between the two successive objects is large the positive after images of the objeets help to observe a direction of apparent movement of the objects in certain conditions. But here the observer perceived the distance between the successive objects became smaller than the acual distance due to the positive after images.

4. With regard to the fourth issue : At the time flickers appear, attitude and the eye movement of the subject played an important role in determining the direction of apparent movement. If the subject created an attitude to see movement in a certain direction, whether same or opposite to the actual direction of the moving objects, the subject would perceive in that direction. Similarly, if the subject moved his or her eyes sidewise whether same or opposite direction the subject would perceive the direction of the moving objects in the same direction to which he or she moved his or her eyes. But under other conditions, attitude and the eye movement played no important part so far as the direction of apparent movement was concerned.

5. With regard to the fifth issue: There are individual differences so far as R.L. of direction and speed of the moving objects in apparent movement are concerned. They may be due to physiological factors like difective vision etc., or psychological traits like temperament etc., or to both.

6. With regard to the sixth and last issue: In order to perceive real speed and direction of moving objects in apparent movement the speed of the moving objects, the speed of the camera and the speed of the projector should remain equal where apparent movement is possible.

Conclusion

The author does not want to draw any general conclusion now because of the paucity of the data at his disposal. But his researches may help to the psychologists to investigate further to the field of the application of apparent movement in every day life. Final conclusion may be drawn later after the author gets sufficient amount of results in his research.

SELECTION TESTS FOR SKILLED AND SEMI-SKILLED WORKERS*

S. P. GHOSH (*Calcutta*)

The present investigation is an attempt to construct two batteries of selection tests for two categories of industrial workers, skilled and semi-skilled which may be used by industrialists and employment psychologists of our country in future selection. The theoretical conception of skilled and semi-skilled as mechanical and manual workers has been verified by an opinion survey of 30 labour well-fare officers of different industrial organisations of India. Secondly the significance of difference of the two groups has been tested by Fisher's 'Z' test and statistically it has been found that the divergence between the skilled and the semi-skilled mainly lies in mechanical and manual aptitudes.

Formulating the concepts of skilled and semi-skilled, the author has proceeded to analyse the different types of skilled and semi-skilled jobs and has made two job-psychographs representing the essential qualities needed in the two groups of workers for executing the jobs successfully. On the basis of the job psychograph for semi-skilled workers twelve psychological tests were chosen and administered upon 209 semi-skilled workers working at the civmil centre Nagpur. The supervisors' ratings of the workers were taken at the same time in seven questions of qualities graded in a five-point scale A,B,C, D, E. The supervisors' ratings which have been used in the present investigation as measures of efficiency criteria have been verified statistically to be objective and representative. The representative character of the ratings has been proved from the very nature of frequency distribution curve, and the divergence between the observed and the expected frequencies as determined by the 'chi-square' test has been found to be very small as the value of x^2 is $3{\cdot}58 (df=9)$ and which lies between .30 & .50. Other statistical methods have also been applied to prove the objectivity of the ratings like outputs. Not only that, the author has established that 'ratings' are better criterion of efficiency measures than outputs in industries.

* Synopsis of the thesis for D. Phil. Degree, Calcutta University, 1951.

PREDICTION FORMULA FOR SEMI-SKILLED WORKERS :

Establishing the objectivity and representative character of ratings, the scores of the twelve tests as applied upon the semi-skilled workers, have been correlated with the criterion of ratings, and on the basis of simple correlation four tests have been eliminated owing to their low and non-significant correlations. The remaining eight tests have been computed into a battery by Wherry-Doolittle test selection method of multiple correlation. The best prediction formula for the semi-skilled workers as done by the weighted sum of the tests chosen both from statistical and psychological view points includes four tests—(*d*) Crockett mannal ability, (*f*) Passalong (*h*) Neurotic Questionnaire, and (*c*) Stenquist mechanical ability. Now, determining the battery of selection tests (*dfhc*) the author in giving weightage to them has taken the regression co-efficients of the tests as substitutes for their respective weights On the basis of the above weights the Efficiency Index of the Prediction formula for semi-skilled workers is :—

$$E = 100d - 42f - 32h + 94c$$

Here in the prediction formula N—Q (−) negative means that less the neurotic traits present in a semi-skilled worker better will be his efficiency. This is also supported by our observation. Highly neurotic persons will not be able to work in cooperation with others. He will show symptoms of fear in facing a situation. Secondly passalong (—) negative means higher intelligence is not necessary for being a good semi-skilled worker. We learn from our observation that certain amount of intelligence is necessary for success in every job but highest intelligence is not necessarily an attribute for a person for being successful in all the jobs. There should be different levels of intelligence for different jobs.

PREDICTION FORMULA FOR SKILLED WORKERS :

Constructing the prediction formula for semi-skilled workers the author has carried out his investigation on two groups of skilled workers, one at the civmil centre Nagpur and another at WIMCO, Calcutta. Twelve psychological tests were administered upon the first group on the basis of the job-psychograph for skilled workers and the test scores were correlated with the foreman's ratings verified statistically to be objective and representative. The weighted sum of the test scores with ratings has been computed by the Wherry

Doolittle's test selection method of Multiple correlation and the prediction formula for the skilled workers at Nagpur includes the five tests *cfhda—e g*. (*c*) Stenquist mechanical (*f*) Passalong (*h*) Neurotic questionnaire (*d*) Crockett (*a*) Steadiness.

Next eight tests were administered upon the second group at Calcutta and the test scores have been correlated with outputs as the measures of efficiency criterion The weighted sum of the scores with outputs has been computed and the prediction formula for the second group WIMCO, Calcutta includes five tests acegh, *e.g.* (*a*) Passalong (*c*) Stenquist mechanical (*s*) Dotting test (*g*) Crockett (*h*) Extrovert—Introvert.

Now either of the two batteries is to be used or they should be combined into a single one. There are three tests (Passalong, Stenquist and Crockett) common to both the batteries and it is felt that the two additional tests (Dotting and Extrovert—Introvert) used in the Calcutta battery are more important from psychological and practical points of view. So may we accept the Calcutta battery as valid for Nagpur workers and if so how to combine the two into a single one. To achieve this end the Regression equation of foreman's ratings (X) on scores in Passalong (P) Stenquist (S) and Crockett (C) the common tests, was obtained for the skilled workers at Nagpur in the formula :—

$$X = 18.4800 + .049415P + .110737S + .005057C$$

This equation was used to estimate the foreman's ratings (X) for each of the skilled Calcutta Workers for which P.S.C. scores as well as production record (Y) were available. Plotting (X'Y) on a Dot diagram a fairly high correlation (.72) was obtained between estimated foreman's ratings and production of the Calcutta workers. Thus the estimated foreman's rating is a good indication of production. On the basis of this finding that there exists a close relation between ratings and productions, the Calcutta battery which predicts production can be accepted as a valid one for predicting rating as well. That is, the calcutta formula appears to have universal validity that is applicable for skilled workers working at Nagpur or anywhere else in India.

Now, in combining the two in a single one, the Calcutta battery has been accepted and it has been given weightage by taking into account the Regression co-efficients of the tests. The final prediction formula for skilled workers with efficiency index stands thus :

$$E = 100a + 66c + 8e + 2g + 60h$$

The prediction formula for skilled workers thus includes Passalong (intelligence test), Stenquist (mechanical aptitude), Crockett (manual ability), Dotting test (a test of simultaneous and disperate attention) and Extrovert-introvert (a personality test). Besides the other tests the inclusion of the Dotting test is all the more justified as the situation in this test approaches more closely that of normal work in industries. The extrovert-introvert test is the best personality test for the skilled workers. Most of the skilled workers, have been found to be of introvert type. They have fewer social distractions and therefore concentrate more on the work. Application of the two prediction fomulae

1. (Semi-skilled): $E = 100d - 42f - 32h + 94c$
2. (Skilled): $E = 100a + 66c + 8e + 2g + 60h$

Now for the practical purpose of selection of requisit number of skilled or semi-skilled workers, the efficiency index is to be calculated of the applicants tested by the formula (2) or (1) and arranged in a descending order from the highest to the lowest. The required number would be selected from the first positions.

Conclusion

The above two prediction formulae remain not merely as theoretical discoveries but they have immence practical implications and commercial values. The administration time for 1 & 2 is 1 hr. 45 mins. and 1 hr. 40 mins. respectively. This time can again be minimised when some of the tests are given in group. Thus the application of the batteries for commercial purposes will involve less time and money. These devices are expected to be useful tools in the hands of industrialists and employment psychologists of our country. They will prove to be beneficial to the employers in particular and to the society in general.

A NOTE ON TENSION STUDY IN CALCUTTA INDUSTRIAL AREA

S. K. Bose (*Calcutta*)

The study began early in 1952 with the co-operation of the managements and labour unions of two big industrial concerns of Calcutta, The Western India Match Company Limited, and the National Carbon Company (India) Limited, under the auspices of the Department of Psychology of the University of Calcutta. Some financial assistance has been received from the Ministry of Education, Government of India, the Managements of the industries concerned and a few private donors. Arrangements have been completed to extend the study to another industry, The Metal Box Company of India.

In 1950-51 two pilot studies were carried out by the present writer in collaboration with a band of research students of the department and in consultation with Professor S. C. Mitra, Head of the Department of Psychology. The purposes of these studies were: (*i*) To find out the attitude of the workers toward the managements, and (*ii*) To determine the order of the different factors which usually men want from their jobs. Some of the results of these studies have already been reported in the Indian Journal of Psychology. Samples of workers in five different factories were examined with the help of specially prepared questionnaires by individual interviews.

Following that, the present series of 'tension studies' began for further improving 'human relation' between the employer and the employee in industries. One hundred workers in each concern, selected on random sample basis, have been interviewed and psychologically tested. They have been given a non-verbal intelligence test. This test is a modification of the Likert Test made in this laboratory to suit the Indian workers. A Personality Inventory of thirty items has been used to determine the temperamental qualities, particularly sociability. Some of the items have been taken from standard personality questionnaires with necessary verbal changes. To understand the trends of attitudes and feelings of the workers a specially designed Attitude Questionnaire has been used. The workers are required to record their responses on multiple-choice answers sheets. Since many of the workers are illiterates the interviewer have to

present the question and elicit answer in course of conversation with them. The method of indirect questioning has been applied generally, and the actual checking on the answers sheet has been made by the interviewer. The answers suggested have been arranged on a four-point graded scale with quantitative values assigned to each item. The degree of attitude is calculated in terms of the score values computed by usual statistical procedures. Particulars about the workers interviewed regarding their home conditions, personal likes and dislikes, hobbies, social positions, etc., have been obtained in a preliminary interview,

The purpose of the interview and the testing is to select a small batch of four or five workers who are moderately intelligent, sufficiently balanced in temperament, neither too favourably nor too unfavourably disposed toward the management, not very much subjected to home or social tensions outside working hours, resourceful, sociable and cooperative. The opinions of the managements and the labour unions have been taken in to account in the final selection of these men so that they are acceptable to both the parties. These men then been placed under training so that they may know how to make communication effective, how to stop the spread of baseless rumours, how to remove misunderstandings. They will be told as far as possible company's principles of wage structure and personnel policy. They have to be first convinced of the good intentions of the company and then they will share that conviction with other fellow workers by inducing the latter to have the correct point of view in course of their daily informal talks inside and outside workshops.

In addition, group discussions with batches of supervisors and foremen have been arranged. The supervisors and the foremen have been first individually interviewed with the help of another specially designed attitude questionnaire. In the group discussions the problem of human relations in its theoretical and practical bearings with special reference to personal experiences is considered. The acceptable principles and practical methods will gradually evolve out of such discussions. The psychologist attends these discussions as a member of the group and exercises an indirect influence in regulating the trend of discussions. He supplies information and explains technical points when necessary.

The attitude questionnaire that has been used in interviewing the workers comprises of sixteen items. The items have been so prepared that two of them relate to more or less the same subject.

Thus there are eight pairs of items designed to tap eight different feelings or attitudes. These are :

1. Behaviour from the authorities.
2. Favouritism by the supervising staff.
3. Wage rates and other financial incentives.
4. Welfare measures and other non-financial incentives.
5. Encouragement and help from supervisors and foremen.
6. Opportunity for offering suggestions and channels of communication.
7. Trust and confidence in workers by the authorities.
8. Security of employment.

Probable multiple answers arranged in a graded order are presented along with the items. For example, the items relating to behaviour from the authorities and wage rates, and their corresponding answers, are as follows :

Behaviour : Item 1. On the whole the supervisors and other high officers here behave well with the workers. Answers :

(*a*) Almost always behave well.
(*b*) Generally behave well, at least many of them.
(*c*) Some times ill behave.
(*d*) Usually ill behave.

Item 2. The treatment which the workers get from the supervisors and other higher officers is, generally speaking, not better than what is usually to be found in many other factories. Answers :

(*a*) They could not get better treatment elsewhere.
(*b*) They are not sure of that.
(*c*) They do not like the way in which they are treated, but conditions are perhaps the same everywhere.
(*d*) The treatment could not have been worse.

Wage Rates : Item 3. The workers are more or less satisfied with the wages etc., they get here. Answers :

(*a*) Most of them are satisfied.
(*b*) The company could give higher wages.
(*c*) The company's policy is to pay as little as possible.
(*d*) Most of them are dissatisfied.

Item 12. Many workers will leave this place if they can get the same wages elsewhere. Answers :

(*a*) Many will sure leave.
(*b*) Some may leave.
(*c*) A few may leave.
(*d*) Many will not leave even for higher wages.

The over-all attitude scores have been calculated and correlations have been worked out between paired -items scores and total attitude scores. The influence of a bias factor with respect to any one item over other items has been examined. Attempts have been made to analyse the cause of low scores (expressing unfavourable attitude) for a particular item.

In interviewing the supervisors and foremen the attitude questionnaire which has been used has 26 items. These items relate to his own difficulties in adjustment, if any, his views regarding his duties and responsibilities, his opinion about the men under him, etc. Some of the items were as follows:

Item 2. As a supervisor it is no doubt your duty to attend to the following points. But which of these do you consider to be the most important? Answers:

(*a*) Increasing production.

(*b*) Maintaining order and discipline.

(*c*) Helping workers in difficulties whenever necessary.

(*d*) Taking such steps as will motivate the workers to do their very best.

(*e*) Any other.

Item 4. What were your plans or ambitions before you started working here as a worker or supervisor? Answers:

(*a*) Do something like this kind of job.

(*b*) Enter into a different vocation.

(*c*) Obtain higher education, general and technical.

(*d*) Start own business.

(*e*) Any other.

Item 8. What do you think of the men under you? Indicate approximate percentages under each head.

Per cents: 10 25 50 75 90

(*a*) Sincere and hardworking.

(*b*) Require strict supervision.

(*c*) Without any interest in work.

(*d*) Habitual grumblers.

Item 14. Do you think that the workers now show a growing tendency to be treated as socially equals with their supervisors? Answers:

(*a*) That is so.

(*b*) Some of them feel that way.

(*c*) There is no evidence of that as yet.

(*d*) They do not at all care for such equality.

Scrutinising the results of interview with the supervisors the plan for group discussions with them are made. The 'role play' technique of training supervisory staff has not been employed yet, but it will be introduced soon.

With the limited resources at disposal the study could not be pursued as vigourously as it should have been done, and the progress though steady has been rather slow. A good feature is that both the parties, the employer and the employee, have accepted the psychologist as disinterested third party doing scientific work in their interest and both have extended ready cooperation. What little has been done has given them satisfaction and further results are being eagerly awaited.

ABSTRACTS

Developments in the Concept of Psychopathic Personality (1900-1950) M. Gurvitz (British Journal of Delinquency, Vol. II, No. 2, 1951).

The author gives summaries of the Concept of Psychopathy of different writers from 1900-1950. He points out that the term 'Psychopathic' appears to have originated with Koch in 1888 and in its early conception included not only moral insanity but most of the mental disorders except psychoses. Though there appears a tendency to use the term in a more restricted sense by excluding neuroses, the early connotation seems to reverberate even as late as 1931 in Kahn's conception of the term. As to its aetiology, writers differ among themselves Some maintain that it is a congenital defect characterized by an inability to acquire moral values, while others maintain that it is an acquired form due to improper development, while there are still others who maintain that it is due to the interaction of hereditary and environmental factors. In the early thirties an extremely sociological point of view was advanced by Patridge, substituting the term sociopathy for psychopathy, to designate a deviation in social relations. Prichard's concept of morai insanity was only one of the varieties of the disorder. In 1939 a clear working description of the characteristics of psychopathic type was given by Henderson. Opinions still differ among the writers as to its aetiology. Some maintain that the term has no legitimate place in psychiatric nosology or dynamic classification, while others accept it as a useful category and they carry on research on psychopathy to find out the different types of the disorders.

A. DATTA

Memory & Intelligence—By J. G. Ingham—Page 20. The British Journal of Psychology—General section—Vol. XLIII, Part I, Feb., 52.

'A memory process may be defined as one in which learning modifies later behaviour or experience. Assuming this modification to be mediated through some physiological change within the organism, three phases of the process may be distinguished. In the phase of impression the organism interacts with its environment in some way and is modified. During the retention phase, the modification is maintained. Finally, the behaviour or experience of the organism occurs in a modified form and this will be called the re-emergence phase.

The problem of research of the author is 'Can inter-individual differences in the retention phase of all memory processes be entirely accounte

for by differences in general intelligence plus specifics, or is it necessary to postulate the existence of another factor influencing retention in all circumstances?

Eight memory tests were devised, each one involving initial learning upto a constant criterian and subsequent re-learning after 30 mins. The tests were applied on 80 subjects of whom 77 were N. C. O's and O.R's from a battalion, 2 were students and one a member of the staff of the Institute of Psychiatry.

It was necessary to keep the subjects occupied during the retention interval, in order to minimize the tendency to review the material learned. As a measure of intelligence was also required, the most economical procedure was to occupy this time interval with an intelligence test. Each test session was divided into 3 phases:—(1) Learning all the memory material to a fixed criterion. (2) Time interval, occupied by intelligence tests (The Wechsler tests were used). (3) Testing the amount retained.

Four methods were used to assess the various stages of the memory process. They are (1) Learning score (2) Retained items (3) Saving score (4) Immediate memory.

G factor was obtained by an analysis of the correlations between all the Wechsler sub-tests.

A factor analysis of all the correlations indicated that a factor other than 'G' was required to account for the correlations between memory tests. This factor could reasonably be interpreted as one influencing the retention phase of the memory process.

S. C. BISI

On the Nature of Inhibition in the Cerebral Cortex—By Max Hamilton, University College, London. Psychological Review. Vol, 59, No. 1; January, 1952.

Inhibition is one of the most fundamental activities of the Cerebral Cortex. Previously the hypothesis on the nature of inhibition was based on certain experiments of Pavlov which depended on the functional mosaic theory. The theory claimed that an area in cerebral cortex was responsible for inhibition. According to the author this hypothesis has certain drawbacks. The author points out that under certain special experimental conditions, conditioned reflexes are generally differential conditioned reflexes depending upon conditioned inhibition. A 'simple' conditioned reflex, the author remarks, is not as simple as it seems because the whole environment both internal and external is responsible for conditioned responses. This hypothesis of the author links the previous hypothesis with the present view that inhibition is a function of the cerebral cortex acting as a whole.

NISITH RANJAN CHATTERJEE

Responses in Absence of the Acquisition Motive—By Wilse B. Webb. Washington University, Psychological Review. Vol. 59, No. 1; January, 1952.

By reviewing various theories of responses in absence of acquisition motive the author puts them into three sets which are as follows:—

1. Nominal theory:—According to this type of theory the responses in absence of the acquisition motive is elicited as an autonomous process. The author is of the opinion that this theory is descriptive and functionally useful.

2. Irrelevant Drive theory:—In absence of the drive of acquisition the response is elicited by the presence of other unreduced drives. These unreduced drives are restricted to a specified condition.

3. Acquired Tendency theories:—These theories suggest that the responses in absence of the acquisition motive may be evoked by association with an original drive. According to the author these theories are based upon assumptions concerning the acquisition of the evocation tendency of learning.

NISITH RANJAN CHATTERJEE

Dynamics in Accident-Prone Behaviour—By Lawrence LeShan. Psychiatry. Vol, 15, No. 1, Feb., 1952.

Two classes of studies dealing with accident-proneness have been briefly reviewed, (1) Those that explore the existence and consistency of accident-prone behaviours and (2) those that describe the behaviour of accident-prone persons in accident producing situation and in their general life. While more or less consistent pictures of the behaviour of accident-prone persons are obtained from the second class of studies mentioned above, there is divergence of views in the first class of studies. The present paper gives an account of an experiment that was carried on by the author on 59 accident-prone persons by means of a projective device. The Projective Test that was used is known Warthington Personal History. This comparatively little known test is a job application blank where questions centre around various like areas such as family, education, health, employment and so on. The test has been validated and has been used both clinically and industrially with marked success. Analyses of the test reveal strikingly similar pattern among the accident prone. The accident-prones have only superficial ties with other human beings; They are social isolates for all their wide circle of acquaintances; They are often very much preoccupied with their health, physique, etc. They show a sense of failure that they have not achieved as high a position as they wished. There is a tendency in them to perceive stimuli in terms of their need system rather than socially agreed on ways. They often show marked hostility to nearly all authority figures and their planing for the future is always poor and errotic.

Deeper analysis reveals that there are two basic patterns which seem to be the primary determinants behind the self-destructive behaviours of the accident-prones; First, oral tendencies particularly oral aggressive trends are very strong in these people; Second, their solution of the oedipal problem was a poor one and its traces continue to play a major role in the motivation of the person.

All the character traits of accident-prones mentioned above are shown to have their origin in these basic patterns.

K. MAJUMDER

On the Psychoanalytic Theory of Instincts—By T. S. Szasz (The Psychoanalytic Quarterly, Vol. 21, No. 1, 1952).

Psychoanalysts differ among themselves regarding their views on the problem of instincts. Freud's theory of the death instinct seemed to have been influenced by the biological theories current at that time. These theories were largely based on the second law of thermodynamics which applies only to closed systems. Since the phenomena of life can occur only in open systems, the principle of entropy is not applicable in these circumstances.

The author suggests the unitary theory of instinct. According to this theory there is a single 'primary instinct'—the life instinct—the aim of which is to keep the life processes of living systems in continued operation, which is accomplished by drawing negative entropy from the environment. Death results from environmental interferences with the life instinct. He cites Carrel's tissue culture experiments. The results of these experiments appear to substantiate the unitary theory proposed. Under the optimal metabolic conditions of the experiments, tissues continued to grow indefinitely and was shown to be potentially immortal, but there occurred no changes in the tissues—no qualitative change, no differentiation, no development. The genesis of new structures and functions, which is the essence of development, is the result of frustration of the life instinct. The foregoing conception is not a new one. The same idea was expressed by Ferenczi as early as 1913 and Freud's early writings were dominated by similar views. Following *Beyond the Pleasure Principle*, Freud changed his basic concepts. The observations which prompted Freud to adopt these views centred round masochism.

The author suggests that the varied phenomena of life are the results of adaptation of the organism to external (disturbing) stimuli. The adaptation may be progressive or regressive. Among the factors which determine whether a living system would react progressively or regressively, the degree of development of the living system under consideration appears to be of paramount importance. That is to say, while the most highly developed organisms are most prone to react regressively, primitive organisms tend to react progressively.

A. DATTA

Artistic Perception As a Possible Factor in Personality Style: Its Measurement by a Figure Preference Test—By F. Barror and G. S. Welsh. The J. of Psychol, Vol. 33, 2nd Half, April, 1952.

In course of a series of investigations on artistic preferences the authors found considerable differences between artists and non-artists in the matter of their likes and dislikes for the stimuli used. The stimuli figures consisted of 200 ruled and free-hand drawings of geometrical figures drawn on 3″ × 5″ cards in black ink. Preferences could be classed into two types *viz*., those for simple symmetrical figures and those for complex assymetrical ones. The scores on these two differing aspects suggested that artists preferred more the latter than the former. This suggestion was further confirmed by making a scrutiny of the set of figures that was liked both by the artists and non-artists. The factor analysis gave clear indication of likes and dislikes in the set of figures thus obtained. On the basis of their findings a scale of artistic discrimination was constituted. This scale revealed marked coincidence when applied to a new group of artists and non-artists. The reliability coefficient was high.

R. G. CHATTERJEE

Localisation of Sound During Rotation of the Visual Environments—By M. D. Arnoult: Amer. *J*. of Psychol., Vol. LXV, No. 1.

This is a report on the experience of sound location when the entire visual environment is rotated. The subject is required to locate the sound under three conditions, *viz*., (*a*) during an experience of rotating to the right; (*b*) during an experience of rotating to the left and (*c*) during a stationary position. Ten subjects participated in the experiment where sound stimulus consisted of a 120v buzz made by headphones. The authors conclusions are that a tendency exists to displace the sound in the direction of the experienced rotation. The latent period of rotation ranged from 5 seconds to 58 seconds and in general the length of the displacement is small. The mean frequency of eye movements during rotation varies from 2 to 3,4 per second.

R. G. CHATTERJEE

The Constancy of Crime—By J. M. Van Bemmelen (*Brit. Jour. of Delinquency*, Vol. II, No, 3, 1952).

While studying French criminal statistics for the years 1826-30, Quetelet formulated the concept of constancy of crime. Criminologists and sociologists do not agree about this concept of constancy. From a comparative study of the Scottish, Dutch and English statistics for a number of years, the author asserts that in every country there is a constancy of crime and that this constancy factor becomes more apparent when separate groups of persons or particular types of crime are considered. Quetelet admitted the fact that changing circumstances are accompanied

by changing criminality. The author supports the reasonings given by Quetelet for the constancy of the crime rate. He feels that many criminologists, *e.g.*, Bonger, have recognised the importance of social and economic factors but have failed to give due importance to the psychological factors in the causation of crime as a mass phenomena. He concludes that Quetelet's law of individual variations largely accounts for the constancy of crime.

A. DATTA

Odysseus, the Return of the Primal Father—By Joel Friedman and Sylvia Gassel. (Psychoanalytical Quarterly Vol. XXI, No. 2, 1952.)

The authors of the article have attempted to reconstruct from the stories of Greek mythology the schema of the community's unconscious attitude as revealed through the motivations of the heroes. In the myth of the Orestes they have shown that the heroes expressed the community's repressed attitude towards the parents and the sense of guilt arising out of it. In this story Orestes killed his mother and her lover Aegisthes, the murderer of his father. The story of Odysseus represents the return of the primal father and the story of Oedipus, according to them, represents, the killing of the primal father by the sons. If the stories are to be arranged according to the psychological cultural development of the society then the legend of Oedipus should come first and the story of Orestes should occupy the second place and that of Odysseus should come next. In the beginning the primal horde existed with a sense of security under the dominance of revengeful father. His sons revolted against him and he was killed. Next one of the sons succeeded the father and sense of guilt and establishment of taboo followed. This stage was represented by the story of Oedipus. In the third stage the taboo was partially lifted by the faithless mother and this was represented in the Orestes story in which Aegisthus killed Agamemnon but Orestes avenged his death. Orestes represent the devoted son who has given up his incestous desire and wanted that father should rule and Aegisthus represented the revolting son like Oedipus who had actually killed his father. Telemachus son of Odysseus like Orestes was devoted to his father and wanted his father should come back and punish the wrong doers. In the fourth stage the son of the primal father was accepted in the place of the father and Odysseus's return and his being accepted by the family represent this stage.

N. N. CHATTERJI

Communication, Supervision, Morale—By C. C. Browne, Wayne University and Betty J. Neitzel, National Bank of Detroit. Journal of Applied Psychology, Vol. 36, No. 2, April, 1952.

In estimation and communication of responsibility, authority, and delegation of the authority by three supervisory levels of female employees

in an utility company the authors applied the R, A, and D scales developed by Stogdill and Shartl and Haris' morale scale. Disparity Scores were also used which represented the differences between the individuals estimation of R, A & D for herself and the estimates of her supervisors or assistants. The three supervisory levels as designed by the authors were A, B and C, where A the inaer level of the three functioned in supervisory capacity to level B, level B supervised level C and level C supervised a non-supervisory level in included in the authors' study. The number of cases studied by the authors were 8 of level A, 26 of level B, 66 of level C and thus the total number of cases was 100. Results obtained by the authors showed amongst other things that individvals estimated their responsibility, authority and delegation of authority in relation to their position in the company. Those nearer to the focal point of the organisation had higher scores on all variables. Responsibility and authority were not estimated to be equal. Most of the employees believed that their responsibility exceeded their authority. The disparity scores gave evidence of incomplete or unsatisfactory communication. Morale scores were found to be positively related to the echelon of supervisors. In the inner levels those who estimated responsibility and authority higher, tended to have lower morale scores.

NISITH RANJAN CHATTERJEE

"**The Role of Tests in the Medical Selection Program**"—By Ray B. Ralph and Calvin W. Taylor. Journal of Applied Psychology, Vol. 36, No. 2, April, 1952.

To select the right individual far the medical profession from a large number of applicants is a difficult problem. The author pointed out that in America the Medical Selection Committees spent considerable time and effort over this problem and constructed several tests for Selection. Of these test; the Medical College Admission Tests (MCAT), General Aptitude Test Battery (GATB) and Modern Society test are famous. Studying various aspects of these tests statistically the authors remark that many of the subtests in MCAT had shown little evidence of being valid as predictors of medical academic success. More over the MCAT takes a long perid for its application to the subject. It may be possible that some of the subtests like Modern Society are valid for some desirable purpose other than prediction of medfeal academic success. A reduced battery yielding four aptitude scores of GATB (namely Intelligence, Verbal, Numerical, Spatial) can be administered in less than (1/7) the time taken by MCAT. More over it was found that a multiple correlation of .56 was obtained between the GATB and the reduced battery against the five qearter criterion. A higher multiple correlation of .6 was obtained for the four aptitude battery against four criteria.

The above results of four aptitude-combination competed favourably with the MCAT both in predictive value and the time of appiication of the tests. The authors' view is that the premedical science grade point average was the best predictor of Medical success and so played an important role in medical selection programmes. The recent index of general ability scores has been dropped, leaving only the MCAT profile—Verbal ability, Quantitative ability, Modern Society and Science. The Modern Society Test is the subtest in the current MCAT which measures other factors which are well defined criteria of medical success. Further investigation is needed in order to have sign ficant scholastic predictive value of premedical science grade point average, the four aptitude scores and certain subtests in MCAT.

NISITH RANJAN CHATTERJEE

The symbolic significance of twins in dreams—Moris W. Brody. The psychoanalytical quarteriy. Vol. XYI, No. 2.

In the present article Dr. Brody has studied certain dreams in which twin personalities appeared and he has tried to show that twins are a symbolic representation of the dreamer and his mother. He has described several iliustrative dreams to prove his view point. He believes that twins represent the pregenital union of child with the mother. According to Freud a man has three inevitable relations with woman—mother, the beloved who has been chosen after the mother's pattern and finally the mother earth who receives him again. Twins, according to Dr. Brody, represent the first and the last relation with the mother *i.e.* life and death. Foetus gets its nourishment from the mother; the mother earth gets its nourishment from the dead body it receives and thus twins become the symbol of fertility. He has tried to corroborate his view from mythology also. In certain cultures there is a belief that twins have got magical power over rains, and they should be buried near water. As water is the symbol of mother these beliefs signify that the child should be brought in contact with the mother and this kind of relation would increase the fertility of soil which in turn has a close relation with human fertility. Twins in dreams represent the wishful thinking that the child by getting united with mother compel her to give up hostility and yield life to him.

N. N. CHATTERJI

We reproduce below an extract from an article on 'Cultural Psychiatry during a world tour of Mental Hospitals' by Dr. Henry Raphael Gold, M.D.. New York, published in the American Journal of Psychiatry, Vol. 108, No. 6, Dec. 1951. We are grateful to the author for kindly permitting us to reproduce the extract.

India and Kashmir.

The far larger sector of mankind, India, is also sorely be set with a growing crop of problems. There is a shortage of nearly everything except congested humanity of whom there is almost 45 millions. There is a pressing need of millions of teachers, perhaps as many physicians. Psychiatrists therefore come in the category of luxury. Dr. R. S. Lal of the Agra Mental Hospital told me that there are 17 psychiatric institutions in the country with some 50 psychiatrists. There is also a small psychoanalytical society publishing a journal under the leadership of Dr. Bose, an old disciple of Freud. Actually, however, psychiatry has been practised largely as a form of medical jurisprudeuce, being in the main concerned with questions of civil competence and certification. Dr. K. R. Masani, a psychiatrist of Bombay and a leader of the country's mental hygiene movement, informed me that the Indian Institute of Psychiatry and Mental Hygiene, founded in 1943, has been significantly expanded to form the India Institute of Mental Health and Human Relations, apparently realising that the cultural this complse and psychiatric problems of this complex country are deeply inter-related.

Accompanied by this hospitable collegue I visited the large mental hospital at Thana, about 20 miles from Bombay and not very far from the larger mental hospital at Poonah. The Thana Institution is much over crowded, housing close to 800 patients with a bed capacity for only half that many. However, sleeping on side walks is a very common sight in Indian cities especially since the refugee influx from Pakistan, and one has to pick his steps very warily walking about through the streets of present-day Bombay, The above hospital occupies a middle position between the very advanced psychiatric hospital of Ranchi in north-eastern India with a reception centre at the observation ward of Bhowanipur in Calcutta, on one hand, and the small institutions in the interior on the other. These latter are hardly more than civilian detention camps where mental defectives and deaf mutes are housed along with violent patients mostly certified by so called 'medical jurists' and magistrates. Treatment, if any, varies from modern convulsion therapies to Yogi exercises and Ayurvedic medicines of which there is a large college at the University of Banares. Yet I was told in the mental hospital of the colorful city of Jaipur that they average about 10% of spontaneous recoveries.

Tucked away in the far north west of India is Srinagar, the capital of much disputed Kashmir. There I found a very impressive general state hospital of many wings with Dr. Jacoby, formerly of Berlin, as physician in chief. It has over 300 beds and a modern surgical amphitheatre. However the 'lunatic assylum' housing some 50 patients is 4 miles away and characteristically near the jail. This was not altogether surprising for I had been told by a member of the visiting United Nation's Commission that in some parts of Kashmir (probably Ladakh, near Tibet) the treatment for a man bitten by a rabid dog is to get the patient drunk and tie him to a 25 pound chair. Far away to the south near the storied Taj Mahal is the Agra Mental Hospital housing 650 patients. I have been impressed by their unique occupational therapy methods. They are utilising the Ghandhi movement of the National spinning wheel. Along with the usual cooking and weaving activities the patients are making a sort of home spun air-conditioning screen that is very helpful in the terrific heat of pre-monsoon India. The life in the courtyards of most of the mental hospitals of the country goes on naturally almost as in the squares of the more than half a million villages of India.

BOOK REVIEW

The Psychology of Human Relations—By F. Baumgarten, Translated by E. D. Nisbet, 1950, Published by Sir Isaag Pitman and Sons, Ltd., London.

The present volume is substantially a literal translation of the second Swiss edition published in 1946 The problem of human relations in industry is gaining increasing attention from the social scientists and the industrialists alike. The importance of the factor of motivation in the increase of output is being realised, and the study of ways and means for motivating the workers to put forth their best efforts is engaging the serious attention of the managements. Creation of harmonious atmosphere through good human relations between workers, supervisors and executive officers is now considered essential for dissolving tension and maintaining target level of production. The book gives a historical survey of the problem, deals with the psychology of the workers and their supervisors and offers practical suggestions for solution of certain present difficulties in industries. The book will be found helpful to the students of social sciences as also to those who have to deal in practice with the problem of employer-employee relation.

S. K. B.

A Text-book of Psychology—By S. Jalota, M.A., D.Phil., Published by the author, 1952, Banaras Hindu University.

The want of a concise and yet comprehensive text book of General Psychology has been felt by the teachers and the students of our colleges and Universities. Dr. S. Jalota who was a brilliant student of Philosophy and Psychology and who has teaching experience for many years has given us a text book which goes a great way in fulfilling our requirements. He has not neglected the "philosophic background" but at the same time he has not failed to incorporate developments of modern psychology made out of laboratory studies. His style of writing is free and exposition clear. References to studies by Indian workers is a welcome feature of the book. Dr. Jalota has said that the book is intended for the Degree students. But the post-graduate students will also find it very useful.

S. K. B

OBITUARY

PROF. PARS RAM

The sudden and untimely death of Prof. Pars Ram this year removed from the Indian psychological world an able and earnest worker in the field of social psychology and child study. Graduating from the Panjab University of the undivided India, Pars Ram came to Calcutta for advanced training in Psychology and Psycho-analysis. He obtained his M.A. degree of the Calcutta University in 1928 and joined the staff of the Foreman Christian College at Lahore. There he established himself as a good teacher and sound research worker. After the partition of the Panjab he left Lahore but was soon called upon to accept the position of the Head of the Department of Psychology of the East Panjab University in Delhi. In 1949 he was awarded a Unesco Fellowship for study of Social Sciences in the United States. On his return to India after six months he worked for a time as a Group Leader of one of the Unesco projects of Community Tension Study. Towards the end of 1951 he was appointed Director of the newly founded Institute of Child Development at Ahmedabad, which position he was holding at the time of his death. In January 1952 he presided over the Section of Psychology and Educational Science of the Indian Science Congress. He was the author of many scientific papers.

Prof. Pars Ram's death is mourned by his many students, friends and admirers.

S. K. Bose.

ERRATA.

Please read the following Table after the 17th line of Heading "Results" in page 74 of Vol. 26, year 1951 of Indian Journal of Psychology.

Mean ± S. E.

No.	Average age	Nationality	Pass-along	Dear-born	Cube cons-truction	Block design	Comparison of average age scores between	Value of T	Remarks.
								P—3.74	Significant
29	10.21	Bhils	21.62	17.48	8.56	12.48	metropolis	D—8.31	,,
		(metropolis)	±1.59	±1.26	±,55	±1.37	Bhils & rural	C—3.45	,,
50	11.64	Bhils	15.98	6.92	6.42	2.64	Bhils	B—8.95	,,
		(rural)	±.80	±.39	±.79	±.45			

S. E. = Standard Error

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GROUP-INVOLVEMENT IN THE CAUSATION OF GROUP TENSION*

JAMUNA PRASAD (*Ranchi*)

INTRODUCTION

I am deeply sensible of the honour done to me in your having elected me President of this section. I feel much obliged to the Indian Science Congress Association, and particularly to my colleagues of this section.

During recent investigations various causes of inter-group tension, such as, psychological, social, economic, political and historical have been discussed. The basic ones are those which depend upon how we perceive and judge social situations, what we expect out of them, and how they affect our interests and purposes. It is well known that the feeling of belongingness to our own particular group combined with that of separateness and difference from other groups, constitutes a very important set of factors which determine our perception and judgment of a social situation and the expectancies from it. It has both a positive and a negative aspect corresponding to the in-group and the out-group. This feeling has usually been named in a loose and vague manner as class consciousness. But this term is not expressive of the dynamism involved in the functioning of the phenomenon. The feeling of an individual that because he belongs to a particular group, for example, a religion, a nation, a caste, a province, a race, etc., he should expect advantage from his in-grouper and harm from the out-grouper, is not merely a consciousness of his class, but something definitely more than that. Class consciousness, on R. Center's own showing, is not a psychological reality in the functional sense, unless the members have common interests and outlook, are bound by their feeling of belongingness and loyalty to their class, and are aware of the hostility of its interests to those of other classes (4. Chap. II). It may therefore be designated as the feeling of group-involvement to emphasize its functional or motivational importance in group relations. The object of this paper is to put forward the view that the feeling of group-involvement is the basic

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cause of inter-group tension, and that social distance, stereotypes, prejudice, etc. which characterise every hierarchical and competitive form of society, may not necessarily function and cause tension, unless motivated by the feeling of group-involvement.

GROUP-INVOLVEMENT AND EGO-INVOLVEMENT

These two concepts would appear to be closely connected. An individual is judged by others from two separate perspectives or frames of reference. He is judged to have certain characteristics either solely as an individual on the basis of his personal merits and demerits, or on the basis of the characteristics of his group, especially if he is not sufficiently known through personal contact. In the former case, he is not labelled or categorised, while in the latter case, he is labelled and categorised ordinarily in terms of the stereotypes attaching to his group. In the former case, other person's judgments would make him relatively more ego-involved, while in the latter case it would make him group-involved. Accordingly, the structures at the basis of ego involvement and those at the basis of group-involvement would appear to differ in certain important respects. In the former case, the attitudes are with the ego as the centre, —ego-centric, but in the latter case, with the group as the centre,—socio-centric. All the members of one's own group, with the attitudes, norms and values of the group are incorporated into a "me" and make for ego-involvement, so that when his group is insulted, he feels insulted. In the case of group-involvement both the other members and the " me " are incorporated into a common and collective " we ", so that when he is insulted he feels that his group is insulted. It would thus appear that there is a significant difference between the two, at least of accentuation or emphasis, denoted by " me " and " we " delineations in social thinking and behaviour.

But there are *two* points to be emphasised in this connection :

(1) There is an essential core of individuality in the ego, by virtue of which the ego is not merely " the social in man ", not merely a version of the group. Whatever is interiorized in the ego may not all be adopted as its own in the intimate and personal sense. It may even clash with the ego's own goal as an external imposition. Lewin and Lippitt have drawn a distinction in connection with group-goal-involvement between one's own goal and group goal, and found, on the basis of experiments, that although both the goals are interiorized in the ego, a clash between the two may, and, does occur. This

envisages the probability that in some situations at least, the individuals may be able to transcend his narrow group norm, show his independence of spirit, form his own unprejudiced judgments and even revolt against his own group.

(2) But in group-involvement, the core of individuality in the ego has ceased to function, the self is overwhelmed by the collective image of his own group, and the possibility of disagreeing with his fellows does not exist. In short, the ego-involved individual still retains his capacity to make impartial judgments, while the group-involved person does not.

Socialisation

Group-involvement is an attitude and frame of reference towards one's own group and also out-groups. It is acquired under the process of socialisation, which takes place in a person's own socio-cultural group. Now, if a group is completely homogeneous, having no sub-cultural areas, nor differentiated sub-groups, there is no inter-group tension or hostility, even though there may be inter-personal hostilities within it. Again, if two such groups live in their respective territories without communication with each other, and in isolation, no inter-group relation or tension is possible. But the moment they come in contact, or when they get differentiated into sub-groups, the possibility of tension arises. The primary condition of tension lies in the context of inter-communication and inter-action, specially when both are involved competitively in the same situation. The crux of the whole question is as to how the pattern of inter-communication and inter-action develops between the groups. But since a group in modern times does not live an isolated life, but in a larger field of multiple groups within a nation (or one nation in an international field), some pattern for group inter-relationship must structurise for inter-group adjustments. A standard of reference for such structurisation is required. The social distance and stereotypes prevailing in the group provide the standard. At the root, however, is the group's own image of itself which, as recent researches have shown, is invariably self-flattering. The researches of W. Buchanan (2 p. 522) on stereotypes reveal that there is a universal tendency to appropriate the complementary adjectives for one's own countrymen.'' Studies of social distance scale in America have shown that if another nation matches the self-image, it is held at the top of the scale. That is how the Americans accept the Canadians and the English to be more intimate

to them than every other nation. To the extent that an out-group matches, or does not match, the collective self-image, it is held to be good and friendly or bad and hostile. Inter-group relations structurise generally in the context of a dichotomous pattern of such a " we-and-they " relations. The flattering self-image of one's own group and its " similars " are good and give protection and security. But images of out-groops are indifferent, or bad, and constitute a threat to security. It appears that this sort of social thinking and judgment follow along clear-out concepts so that groups are regarded as either good and friendly or bad and hostile. All goodness and friendliness are drafted away by the collective self-image of the in-group and its similars, while badness and hostility remain the characteristics of the dissimilar groups.

Social Perception

The question of inter-group relation is based fundamentally on how we see others and how others see us. This is the question of social perception in inter-group situations. Social perception is inter-personal, in which at least two persons of the same, or of different groups inter-act. This at once shows the importance of two things, *viz.*, (1) communication between the two, (2) expectancies of each about the other's reactions. The roles of these two processes in social relations have been rather neglected, and require to be fully explored. I shall have to say something presently about these two.

Taking the instance of an out-grouper as the other party in a social situation, the perception of him would naturally take place in terms of the social norms or frames of reference acquired in one's own socio-cultural group. Recent cross-cultural studies carried on intensively by anthropologists have shown that as a result of socialization, individuals are ' prepared ' to perceive, expect and think in ways determined by their respective social norms and values. Experimental studies carried on by psychologists during recent years conclusively agree in showing that attitudes and frames of reference, congruent with the differential culture patterns of different groups are developed, and provide individuals with common and " shared " norms for perceiving and judging things and persons. The first thing which therefore appears to happen in this kind of inter-personal contact is that the out-grouper must be categorised in terms of the social norms of the perceiver. As a matter of fact, each would proceed in his mind to categorise the other. In a heterogeneous society composed of

multiple sub-groups, particularly in a cast-ridden society like ours, this is bound to happen. With categorisation, the door is opened for stereotypes, prejudices, feelings of dominance or submissiveness, etc. to enter and influence the process of perception. Often mere naming of persons is sufficient to categorise them. Proper names in India are indicative of castes. Razran's experiments on "Ethnic Dislikes and Stereotypes," reported by Otto Klineberg (5, p. 507), demonstrate how social norms, such as stereotypes, affect perceptions. A number of photographs of girls was shown to a group of college students who were asked to rank them for beauty, intelligence, character, etc. Two months later the subjects were shown the same photographs with Jewish, Italian and Irish surnames, etc. added to the photographs. The addition of the surnames now changed their previous ranking in terms of the stereotypes associated with these ethnic groups. This shows that categorisation by naming had definitely affected the perceptions of the subjects. Their perceptions changed from seeing individual characteristics to seeing group characteristics.

The prejudiced person is somehow incapable of discrimination, because he always categorizes the out-grouper. His frame of reference makes him selectively inattentive to individual characteristics. Selective inattention is not oversight or negligent observation, but the result of the functioning of prejudice. Allport refers to Seelman's study which "shows how peoples' power to recognize individual Negro faces varies inversely with their anti-Negro prejudice" (1, p. 10).

It seems therefore that impartiality in perceiving, judging, expecting, etc. in complete freedom pre-determination by social norms and entirely on basis of individual and objective characteristics of a person, is illusory in psychology. This of course, does not mean that a person is incapable of judging anyone rightly and disinterestedly. He can do so provided he can control his own ego and group involvements, and delay his judgments and expectancies until the relevant facts are available.

Communications

It was just hinted above that social perception depends upon communication. Newcomb has suggested that "Social psychological problems must be attacked in terms of communicative processes." (8, p. 42). We will discuss communication between members of opposed or different groups, as distinguished from communication within a group. Inter-personal contact leads to a kind of communica-

tion which initially takes place under the influence of the respective attitudes with which each approaches the other. Each party has its stereotypes and autistic group norms in regard to the other. The inter-communication has therefore to be assumed to proceed in this context. Newcomb writes, "One important aspect of inter-communication has to do with the effects upon members of one group of their perception of the behaviour of members of another group. With rare exceptions, every individual perceives the behaviour of an out-group member in terms of his own group's "social norms". (8, pp. 41. 42). In other words, out-grouper's behaviour is usually perceived in terms of what he has learned about the characteristics of the out-grouper. But, it should be added that the contact provides good opportunity for mutual check-up of their stereotypes prejudice, and reduction of inter-personal social distance. But recent experimental findings on the result of personal contact between foreigners show that in the majority of cases, though not in all, new experience and personal contact even if satisfying are not adequate to remove or even reduce prejudices. When G. W. Allport writes "It was prejudice when the Oxford student remarked that he despised all Americans but had never met one that he did not like," (1, p. 6). It showed that inspite of satisfying contact, prejudices remained unaffected. The subjective, group-involved attitudes and frames of reference are so strong and obstinate that unless they are initially relaxed, new contact fails to reduce them.

One of the most common causes of misunderstanding is a literal lack of understanding of the meanings of propositions communicated by one to the other. The communicative process has to do, to quote Newcomb again, "with the perceived overlap between the communicating individuals. That is, what is expressed by each to the others, and what is received by each from the others, is (hypothetically) a function of what is perceived by each to be the area of shared perception." (8, p. 47). But the sharing of perceptions becomes difficult if each party approaches the other with his respective group autisms. It is really very surprising to see the difference between what you actually say, and what has been recorded by listeners and members of an audience. And when it comes to reporting some more distortions take place. Experimental research is required to settle how far pre-dispositions stereotypes and similar other autisms, which make a person "insular" to his own group, are responsible for misunderstandings. Basic research in the psychology of communication is more urgently required, not only for the study of social psychological problems in general but also of tensions in particular. A host of

problems exists. For instance, take the question of accuracy of communication in respect of situations where only "things" are concerned, and compare it with those where persons, specially of a hostile group, are concerned. The comparative measurement in the two cases will very probably show that accuracy in communication about persons will be less than about things and physical events.

One thing is worthy of note where persons of different groups face one another in a communicative situation. Open expression of prejudice may be inhibited. G. W. Allport mentions the researches of Robinson and Rhode who found that interviewers who appeared to be Jews, or introduced themselves with Jewish names "obtained" far less open expression of antisemitism than did interviewers who seemed to the respondents to be non-Jewish" (1, p. 18). It is difficult to be sure whether in such contact situations, the participants react intramentally to their prejudices as anti-social or undesirable. At least, they do not like to be disagreeable. In any case, the possibility of dissolving stereotypes and prejudices through increased inter-group contact should be experimentally explored more systematically than ever before.

Expectancy

Just as communication determines social perception, expectancy also does the same, and structurises the situation in further definite ways. Expectation of what the out-grouper may be going to do is bound to influence my own perception of him. Expectancies are usually integrated into group attitudes in ways congruent with the attitudes. As a consequence, my expectancy of his behaviour would be influenced by the stereotypes and prejudices which I have learned to attribute to his group. Thus he would be perceived and judged to have no independent personality traits and qualifications except those which follow from the characteristics of his group. My opinion of him and my expectations about him would be the same as are held by the rest of my in-group members. It seems as though in such a social situation, it is not that one individual being confronts another individual being, but their respective group-images. Such expectancies of the behaviour of the out-group implies, therefore, my own involvement with my group. Expectancies dictated under such group involvement feelings may thereby cause misunderstanding, or at least, lack of proper understanding, of the other fellow's attitudes, and make me suspicious of him.

Expectancies of the behaviour of out-groupers are also generally manipulated and channelised by various agencies within the in-group. They suggest the requisite frames of reference. If the frame of reference makes you perceive an out sider as undesirable or hostile, you would expect him to behave in undesirable and hostile ways. As mentioned above, a well-defined frame of reference for perception makes a person autonomously integrate with it such expectancies as are congruent with the frame of reference. Action may then be left to follow upon the expectancies. Therefore one of the methods of publicity, propaganda, and leadership suggestion etc. is just to define or change people's frame of reference about situations, persons, or groups, and leave it to the people to develop appropriate expectancies and behaviour.

Some important Theories of Inter-group tension

We have now seen that social perceptions in inter-group situations are usually determined by the group autisms of each participant so that neither the one nor the other is capable of understanding each other in a way that two in-groupers know and understand each other. In a hierarchical and competitive society, with many different sub-group such as castes, religious groups, social classes etc., scales of social distance, streotypes and prejudice inevitably exist, and determine perceptions and expectancies. They undoubtedly provide the background for inter-group tension. But such tension need not actually arise mearly because they exist. The stereotypes and prejudices etc. may be just mearly sociocultural or traditional patterns of conformity. Indeed with most people they are so, with the exception of certain types of character structure or presonality such as the authoritarian, the conservative, the deeply insecure and anxious etc. If they are regarded as sheer conformity patterns, they do not possess any motivational or functional significance. They may, however, acquire motivational power under conditions of group-involvement. But there are a number of approaches to the problem of group tension. It will be useful to survey them as briefly as possible.

Broadly speaking, there are three such approaches : (1) The psychodynamic approach of which psychiatrists and abnormal psychologists are the chief exponents. The fundamental stand they take is that intra-psychic and repressed aggression produces tension in the individual, and that this tension is projected or displaced upon out-groups. Stereotypes, prejudice etc. are regarded as socially permissive

channels for the discharge of such repressed aggression. These patterns would thus seem to possess motivational power from the very outset. It is further assumed that every individual for the sake of his own internal peace of mind, and relief from anxiety and insecurity, must discharge his aggression along the lines of stereotypes and prejudices etc. upon the out-group as a whole. Group tension would therefore be a sort of collection of individual tensions. This is however, an extreme view. Eysenck warns against the insistance on unconscious motivation, and about the nature and derivation of aggression on the basis of the "extremely subjective interpretations given by a number of psycho-analysis of the dream, free association and other productions of their patients, who cannot by any stretch of the imagination be called a representative sample of the normal adult population (7. p. 50). He also observes that "the tendency in social psychology to look for unconscious processes and rationalisations in relation to all social thinking is open to criticism." (7. p. 64.)

The psycho-dynamic view necessarily requires scapegoating the out-grouper. Zawadski writing on the "Limitations of the Scapegoat Theory of Prejudice" (10-43) and Lindzey in his "Experimental Examination of the Scapegoat Theory" (same journal 1950, 42), have shown that the theory of displacement is not adequate to serve as an explanation of prejudice. Further, it is not very clear how the passage from individual tensions to group tensions is effected. The only answer to this question is the analogy of the steamboiler containing various channels, or safety-valves for the escape of steam power. It is undoubtedly true that repeated frustration and accumulated aggression would produce changes in personality structures, making the person irritable, unstable, anxiety-ridden and authoritarian. But this does not answer the question how each and every individual of a group develops the same personality type. Further, the theory of accumulated aggression with the necessity for its displacement to out-groupers is, in effect, hardly different from the theory of an original instinct of aggression, and is full of dangerous consequences of the need for outlet and the justification, and rationalisation of such a need. Finally, sociologists rightly criticize such a purely psychological and personal theory of inter-group tension as containing the danger of "psychologism" because it ignores the importance of social realities and situations in causing the tension. For instance, it is well-known that stereotypes change with situations. Reference may be made to a number of studies reported by Otto Klineberg in his paper on "National Stereotypes". (5. p. 509.) Shrieke's study of the Chinese in California shows that when the Chinese were in great

demand for certain types of occupation into California, they were described as thrifty, sober, law-abiding in-offensive etc. But when the economic situation had so changed that other groups were thrown into competition with the Chinese, the stereotype about the Chinese changed to clannish, criminal, debased and servile. Again, Meene's study showed that the American stereotypes regarding the Japanese and the Germans changed from favourable to unfavourable with the outbreak of world war II. G. W. Allport makes the observation that "when the Russians were allies of the Americans in war-time, they were readily perceived as courageous, cheerful, progressive and liberty-loving people. When in the post-war period circumstances had shifted, the image became one of a cruel, oppressed, atheistic and double-dealing folk." (3. p. 62).

2. The social-psychological approach pioneered by Sherif and Cantril: Group tension is due to the clash between the norms of one group and those of another. Group prejudice as a social norm is acquired just as a person acquires his identifications, values, and loyalties. "In order to be a good member of the group" writes Sherif, "he has to share these prejudices as well as other values of his group,—positive and negative." (9. p. 340.) It is an aspect of the ego development through family influence and other social pressures. In course of time such social influences are forgotten and the norms become completely interiorised in the ego as part of the constellation of attitudes of which the ego is composed. The norms are no longer merely of the group,—they have become his own. The social distance prevailing in the structure of a group may, therefore, be expressed as ego-distance. The motivational power of the prejudice is, drawn directly from ego attitudes. It is unnecessary to assume repressed aggression in the individual and its displacement to be at the root of prejudice.

This approach appears to be more acceptable than the purely psycho-dynamic one. It takes full account of the social aspects of the origin of prejudice. But it seems to leave no margin for the individual to exercise his individuality independently of the social norms he has acquired. The ego is made almost completely a version of the group,—merely a receptacle which has been filled by the in-take of the group culture. But it is a matter of common observation that inspite of the introception of group norms, an individual may not have accepted all in the truly functional sense, so that he is still capable of taking a detatched and impartial view of others, and of behaving in ways

contrary to the norms acquired by him. The motivational aspect remains rather weak, and insufficiently defined.

3. The third approach may be said to be that of G. W. Allport, who combines the psycho-dynamic and social approaches, as presented by him in his contribution on "The Rôle of Expectancy" in the book called "Tensions That Cause Wars."[3] He insists that both personal and social factors are involved in group tension, and it is futile to argue which is the basic. He says that so far as "immediate" causation is concerned, the psycho-dynamic factors are important, and for "long-run" causation the social, historical and economic influences of a social system are often decisive. In this view the motivation is taken from personal psycho-dynamic factors, and it is linked-up with the prevailing group norms, stereotypes, prejudices, etc. by the process of channelling through traditions, symbols, and the influence of parents and leaders etc. Accordingly his view of prejudice is that it implies categorisation, displacement and rationalisation.

Allport's approach is comprehensive. I have only one remark to make. According to his view, inter-group antagonism would be more an expression of individual psycho-dynamic factors than a matter of social causation, because the source of the motivation is held to be individual psycho-dynamics. He, therefore, writes of channelising of individual hatred upon substitute objects. This would naturally imply that stereotypes, prejudices etc. provide outlets for the relief of inner tension, anxiety, and insecurity. It is, however, quite likely that channelised hatred etc., may still leave to the individual a margin for some independence of outlook, which Allport does not deny to individuals on account of their uniqueness. Many individuals feel, in their cooler moments, that prejudice is irrational and unjustifiable,—some people even condemn it openly. Provincialism casteism, communalism etc., have been repeatedly condemned from the platform. These things imply that some independence and critical power of appraisement are still left. But when the same persons in their actual conduct fall victims to the prejudices they condemn, then 'something' has happened in their minds,—independence of judgment has been lost, and some other frame of reference has come into operation. Our own view is that this 'something' is involvement with their group that has now come into activate their prejudices.

Causation of Inter-group Tension

According to the view taken here the established scales of social distance, prejudice and similar other group norms are patterns of

conformity behaviour. They do not possess motivational power from the outset. As already pointed out, they are unavoidable in a hierarchical society consisting of various sub-groups and organised on a competitive pattern. Normally and in everyday situation, they do not seem to function except as inducements for avoiding certain classes or groups. They are not a sort of standing incitation to exercise hostility against out-groups. There is a large difference in degree from mere avoidance to antagonism and hostility. Intergroup tension in the sense of active conflict cannot therefore be regarded as the result merely of the categorization of the out-grouper through the established scales of social distance, stereotypes, prejudices and similar other group norms. Some additional factors must be assumed to function in intensifying the avoidant attitude into well-defined tension and hostility.

Now it is through the medium of competitive and frustrating situation that the new factor of group involvement comes in. The social-psychological significance of such competitive situations consists in the fact that two groups more or less directly concerned in the situation, now align themselves in definitely conflicting camps. Each group's feeling is intensified with the perception that the other is a rival, and the expectancy that its behaviour will frustrate its interests and purposes. Their respective social perceptions of each other has now changed as for instance of the Chinese in California in Shriek's study quoted above which demonstrated that with economic changes in the situation they came to be regarded as criminal, debased and servile. The ingroup members develop a positive attitude of closer identification, solidarity and cohesiveness among themselves, along with more well-defined antagonism against the competing out-group. This is supported by an observation made by Sherif in his "Experimental Study of Inter-group Relations." He says, "In brief, the consequences of the inter-group relations in competitive situations and in frustrating situations which members of one group perceive as coming from the other group were: (i) to solidify the in-group belongingness and solidarity, to enhance in-group democracy and to strengthen in-group friendships; (ii) to generate and increase out-group hostility, to produce derogatory name-calling which came close to standardising of negative stereotypes in relation to the out-group (*i.e.*, rudiments of prejudice)." (8, p. 420). Even if groups as such are not directly involved in the competition, but only individual members, the same thing would happen, because the members carry the collective images and norms of their respective groups, and are expected to cause the same frustrations. A remark made by G. W. Allport reporting

some important findings of sociologists, is also relevant to our purpose. He says, " Even a differentiated society does not generate acute inter-group hostility unless there is possible up-ward mobility within the social structure. The more numerous the members in an upwardly mobile minority group, the greater the prejudice against them " (1, p. 20). Prejudice shoots up against upwardly mobile minority groups obviously because of the group-involvement feelings of the rival groups released by the competitiveness involved in upward social mobility of those minority groups which stand low in the social and economic structure. In such a state of affairs the irrationality of prejudice becomes more evident due to the group-involvement feeling that the out-group is definitely harmful and hostile. Instead of assuming that accumulated and repressed aggression, with its displacement explains the irrationality of prejudice (Dollard) we may assume, on social psychological grounds, that group involvement is responsible for the same.

Newcomb's Bennington study as reported by Sherif [9] may also be referred to in support of the importance of group-involvement. One of his important findings is that information about, contact with, and the new experience of, the outgrouper are not sufficient to change prejudiced attitude because there is a strong linkage between belongingness with one's group and the acceptance of the group's attitudes and values. New knowledge and experience can function only when they are linked up with the acceptance of some new group as the reference group. The acquisition of a new attitude is a function of relating oneself positively to some new group, and at the same time of relating oneself negatively to the group which inculcates the old stereotypes and prejudices.

Conclusion :

To conclude, the concept of group-involvement has been presented in a tentative form for what it is worth. Its validity as an explanatory principle of social conflicts would depend upon experimental exploration and field observation. For instance, persons may be tested for their high group-involvement and their stereotypes and prejudices against out-groups. If a positive co-relation can be found between group-involvement and group prejudices, the concept would acquire definite significance as an explanatory principle. It is my belief that if the national field, *i.e.*, to new and wider reference groups, a great many range of group-involvement, such as caste and provincial involvements,

is widened from its narrow concentration to more broad based identification with the nation as a whole, and from the national to the international field, *i.e.*, to new and wider reference groups—a great many prejudices would either be resolved, or prevented from functioning. Consequently group tension would also be either reduced or prevented from causing actual social conflicts.

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SOCIOLOGY IN THE U.S.A.

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Sociology in the United States! Why be parochial? In the next 25 or 30 years Indian sociology will be a factor to be reckoned with. But . . . today America is the country of social science.

American research today is contributing to the health and vigour of the social sciences in all countries. Current Indian research in sociology is often patterned on the American style. But we predict that as Indian sociology comes of age it will find its own genius and will develop its own emphases. This we believe to be true of sociology in India and also of the other social sciences in this country as well.

But here we concentrate on American sociology. It is necessary, first, to define the term *sociology*. The science of sociology we shall define as the science that deals with the processes and products of human relations. It is, then, the study of the human society. Or, to use the definition of one of America's pioneers in this field, Franklin Giddings, as he put it in a book published twenty years ago, "Sociology is the study of the behaviour of human beings with, to, and for one another, and of the resulting arrangement of relationships and activities which we call human society." This behaviour of human beings *with, to, and for one another*, and the *resulting arrangements*, are what another American, E. A. Ross, earlier termed the social *processes* and *products*.

The term sociology is less than one hundred years old, and the American Sociological Society was founded only in 1906. Yet by 1950, there were well over five thousand courses in sociology offered in the colleges and universities of the United States. Many American departments offer courses not only in general sociology but in social organization, social theory, urban sociology, rural sociology, sociology of labour, of knowledge, of religion, of language, and so on.

This branching out into an infinity of specializations is a development of the last few years. Each year in fact seems to bring

its new ones. Odum, in the book he has just published, *American Sociology*, quotes the staggering number of 4,594 specialisms which for convenience (!) are put into 409 categories. The first ten categories, in order of size, are: social psychology, social theory, demography and population, criminology and penology, marriage, rural sociology, family, race relations, urban sociology, industrial sociology. These figures include, of course, a good many topics which are post-graduate theses. But even the more modest number of projects reported by the mature members of the American Sociological Society in 1950 comes to 859—of which ninety-eight are in social psychology, over seventy each in racial and ethnic relations, marriage and the family, and industrial sociology, and sixty-eight in the fast rising field "World Areas."

Such a statistical report might itself almost pass for research, considering the present-day emphasis on statistics and surveys. But the status of sociology in America should hardly be judged by statistics alone. The quality of the work done is much more important than the quantity.

Already teachers are trying to put a stop to this fragmentation of sociology. Leading American sociologists, influenced by the "General Education" movement which swept the country in the last few years, have come to realize the dangers of their advanced students knowing more and more about less and less. In 1946 Harvard University led the way in creating a Department of Social Relations, and there are now in this department representatives of the fields of sociology, cultural anthropology, social psychology, and clinical psychiatry. A candidate for the Ph.D. degree at Harvard will today have a little more than the purely specialist knowledge of more conventional topics of sociology. Many other universities are attempting to follow Harvard's lead in this matter.

Sociology, of course, just like physics or zoology, must have its detailed topics to be studied and analyzed. One cannot study "Society" in the abstract; there have to be investigations on specific aspects of city life or of family tensions or group dynamics, and so on. Modern sociology has its laboratory in society, and the sociologist *must* concern himself with small details. But the danger today is that too many investigators of the phenomena of society are concentrating to such an extent on *minutiae* that their science is not developing a unifying body of principles and a methodology that can be used by all sociologists. *Perhaps* a broader training, and in more subject matters, will help this situation. In any case, it is essential that more workers devote themselves to the cultivation of *general* sociology.

Some specific research fields

When we come to choose some specific research fields for examination, we have to be careful which to select. We shall describe briefly some of the current research in industrial relations and in race relations. Both these fields will illustrate some characteristic problems, and both involve phenomena which are of more than purely local importance.

Elton Mayo, a British-American scientist, made the labour-relations type of investigation well known by his studies at the Hawthorne plant of the Western Electric Company in America. Since his volumes on the "Social Problems" and "The Human Problems of an Industrial Civilization," Mayo's successors at Harvard and followers in a number of universities have concentrated on this field of industrial relations. Even Mayo, of course, was not the pioneer in this area; but he showed how informal groups developed in his factory, in Hawthorne, and how these often set goals of their own which opposed the formal goals of management. The evidence as to the importance of informal groups in encouraging or in restraining industrial output is today conclusive.

Many of the studies going on now in industrial relations are sponsored by business concerns with gigantic financial resources behind them. The management of many industries regards human relations research as of "top priority." Of course many more managements remain uninterested in the possibility of sociological investigations of their communities that must be admitted.

Now comes a new phenomenon. Again and again in the literature of human relations we find the recurring theme that the use of more "intelligent" managerial techniques can help to "control" the worker. We must ask this question: is the good of the employees always the motivation for making industrial relations studies? The answer, of course, is that it is not.

Some unions have voiced their suspicions of these "researches" in no uncertain terms. And sociologists have themselves criticized much of this work. A few of them are afraid that it is a bureaucratic device, which has greater political than scientific significance. "Many group researchers in social science," according to one critic, "are 'assimilated members of the American business community.'"

On the other hand there are unions co-operating with managements in sponsoring some investigations. At the Labour-Management Centre at Yale University, the Connecticut Union of Telephone Workers co-operates with the Southern New England Telephone

Company in sponsoring a large study of labour relations. Other examples of similar joint sponsorship could be mentioned; though we don't as yet find the Mine Workers co-operating with the American mine chiefs or the dock workers jointly sponsoring investigations with the United States Lines.

Quantitatively, there is a good deal of research under way in America on these problems. Different problems are being examined at the University of Michigan (where the projects are supported by several large factories and by the U.S. Office of Naval Research), at the Harvard Business School, at the Cornell School of Industrial and Labour Relations, at Yale, California, etc. . . . Also, some of the general studies on Human Relations have had results which are clearly applicable in this field of labour relations. Alexander Leighton, author of the well-known book, *The Governing of Men*, says that our problem is not only that so little is known but that to a large extent what *is* known is not used.

Leighton, incidentally, is now head of the Cornell School of Industrial Relations. But his remark just quoted is applicable also to race relations. We have already mentioned the seventy-four projects in this specialism which are reported by members of the American Sociological Society. Bear in mind, however, that the problems of race relations are not entirely the province of the sociologist. There are the psychological dimensions of prejudice, and these have been recently much studied.

How can we paint this part of our picture? There are so many prejudices in the United States (as in other countries)—against Negroes, Jews, Japanese-Americans, Chinese-Americans, Portuguese, Mexicans, etc. . . We cannot go into details of all this. But recent investigations by psychologists seem to show that actually prejudice is generalized. And intolerance seems to be neither purely social nor purely psychological in origin. It is associated with downward social mobility and also with subjective feelings of deprivation. There are definite psychological " advantages " in looking down on " inferior " groups.

Now, there is a difference between prejudice and discrimination. People often argue that " you can't legislate against prejudice." (This is a new version of the dictum by the nineteenth century sociologist, Sumner, that " Stateways cannot change folkways.") But the evidence is that the prejudiced person is impressed by legal restraints against discrimination. Recent studies have made this clear, and in consequence there are today many projects in the

United States which are beginning to apply the results of research. We think, as regards America, of the Fair Employment Practices Commission, of the different State Commissions against discrimination, of bi-racial housing projects, and so on. (Perhaps we might even cite here as making use of this same principle, and as even more impressive, the constitution itself of democratic India.)

Here is the interesting thing for sociology. The "sociological research" in this field of race relations is not entirely sociological. As Odum puts it, "it is set within the framework of the larger societal situation with moral directives and political perspective more than within the framework of sociological theory and social research." The important thing to note is that sociologist-scientists are so strongly conditioned by their environments that they are definitely influenced in this field by non-sociological considerations also. Many academic researchers are interested in these practical applications. This is good; but this is also the reason for sociology often being confused with "social betterment" programmes. Yet science is *not* "social work." This tendency to confuse sociology with social betterment has dangers.

The sociologist is supposed to study society impartially—to find out or to theorize about "what makes the wheels go round." He should make his good, sound theories immediately available to social workers for application. But applied science is not pure science, in sociology any more than in other fields.

There is always a danger, then, if the motive for making sociological investigations is anything other than the desire for Truth. And the facts are that there is too little "pure" sociological research in the United States. Support is not given in some fields because of the very nature of American society. The American credo is not a simple straightforward thing. We, in our technological society where the products of science are everywhere, are convinced that we need science. But we have always been convinced that "science has no right to interfere with business and our other fundamental institutions." Some of our sociologists are disturbed about the essential sterility, because of this reason, of much that passes for research today.

Now, sociology is not atomic physics. Its findings, though perhaps as revolutionary as the findings of physics, cannot be put into effect without the support of people in general. But whereas only physicists are experts in atomic physics, everyone thinks himself to be an expert in human relations. Many sponsors of research seem, even in the very selection of problems, to hint at the "desirable" results.

When we consider all these things, it should not surprise us too much to hear an eminent sociologist, Harry Elmer Barnes, lament about the tendency of sociologists to be sheep rather than shepherds. He says in a review of a book that we have already mentioned, *American Sociology* by H. W. Odum, " As the United States moves ever more rapidly and completely into the intellectual patterns of the Orwellian 1984 social order, the sociologists are heading in ever greater numbers towards the " Ministry of Truth " or are making their writings to conform to its doctrinal mandates." This is quite an indictment. It is an indictment of American society as well as of American sociology.

But we stand up for the shepherds. There has always been more than one stream in American thought, and there have always been " shepherds." Thus in the last century Lester Ward, who became the first President of the American Sociological Society (at the time when Sumner was so loudly saying that society must be let alone), was forthrightly proclaiming the opposite. To be sure it was years later, but Ward's ideas and sociological theories were translated into every-day by Franklin D. Roosevelt.

Despite the clouds there are shepherds today also. We think of the Lynds, of Leighton, of Stouffer, and others. Of course, with the many sheep, there is much to criticize in sociology. There is no sense in trying to conceal this. Too many sociologists are writing papers—without reading any. Too many have succumbed to using techniques and statistics almost to the exclusion of thinking. Too many do their best to make complicated the simple, that is, to translate common ideas into a senseless jargon. But there is reason to be optimistic.

Robert Merton, of Columbia University, overstates when he says that " The stereotype of the soocial theorist, high in the empyrean of pure ideas uncontaminated by mundane facts, is fast becoming no less outmoded than the stereotype of the social researcher equipped with questionnaire and pencil and hot on the chase of the isolated and meaningless statistic. But the evidence is impressive that our sociological shepherds are not unware of the obstacles to be overcome, and that despite the woolliness of some of the sheep they at least do not have wool over their eyes.

RESPONSE PATTERNS OF DELINQUENTS AND NORMALS TO PERSONALITY TESTS—A COMPARATIVE STUDY

PSYCHOLOGICAL RESEARCH WING, (DEFENCE SCIENCE ORGANISATION)

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INTRODUCTION

In the diagnosis of anti-social components of the personality, projective techniques have been made use of to a varying extent. The interpretation of responses of criminals to these tests has been guided, in a great measure, by empirical or at best commonsense reasoning. Certain types of responses indicating undue and uncontrolled aggression, deep-seated grievances, violent dislikes or a rejection of the social code of ethical values are considered to result in anti-social acts.

Sufficient experimental evidence has yet to be collected to support these assumptions.

Clinicians and the Analysts have relied largely on their personal experience to read delinquent traits in the psychological make-up of individuals. So far as is known, it is not the rule, for them to agree as to the interpretations of given responses.

The Problem.—This is a study of the differences in the responses of the inmates of penal institutions and those who are ordinary citizens of the State.

Tests Used.—(1) *Word Association Test.*—A modified form of Word Association Test was used. This differs from the well-known Word Association Test as was used by Jung. The number of stimulus words are 50. The time allowed for the response is fixed and limited to 15 seconds. The responses are written and may be in the form of words or sentences. The stimulus words are exhibited on card board tablets. The test is used as a group test. The number of individuals in a group at a time does not exceed 50.

(2) *Thematic Apperception Test.*—Seven pictures from Prof. Murrary's set are used. The only modification introduced is that the characters, men and women, are dressed in national costumes. Each

picture is shown for 30 seconds. 3½ minutes are given for writing out the story. The test is used as a group test. The group does not exceed 50, at a time.

Groups Tested.—(1) *Experimental Group.*—A randomised sample of 35 inmates of jails from U.P. was used. The particulars of the convicts are as follows :—

A.	*Offences*	*No.*
1.	Of offences affecting life, *i.e.*, murder ...	12
2.	Of robbery and dacoity	4
3.	Of criminal tresspasses	4
4.	Of rape	6
5.	Of hurt	3
6.	Of kidnapping and abduction	2
7.	Of theft	2
8.	Of false evidence and offences against public justice, *i.e.*, forgery	2

B. *Convictions.*—The men were undergoing sentences ranging from a period of one year to transportation for life, one of them for a year; 8 upto two years; 11 upto three years; 3 upto four years; 4 upto five years; 2 upto seven years, while six were sentenced to transportation for life.

C. *Occupations.*—With respect to their occupations before imprisonment, 25 were cultivators, 6 unskilled labourers, while 4 were engaged in petty trades.

D. *Age.*—The age-group was between 14 to 20.

Ages	*Numbers*
Between 14 and 15	5
,, 15 and 16	4
,, 16 and 17	10
,, 17 and 18	8
,, 18 and 19	7
,, 19 and 20	1

E. *Education.*—The convicts had an elementary knowledge of Hindi and Urdu. They could just write in one or the other language.

(2) *Control Group.*—A sample of 35 boys was tested.

The boys came from the same rural back-ground and were all of peasant stock. They belonged to the same age-group and their educational level was pretty nearly the same.

Classification of responses to W.A. & T.A.

An attempt was made to classify a large variety of responses into as few categories as possible without sacrificing the principal content as well as the form of the responses. An attempt was also made, as far as possible, to preserve the nuances in the content, the tones and the overtones as well as the emotional charges contained in the reactions of the individuals.

The responses were, therefore, classified under three main headings :—

(I) *Reaction.*—By "reaction" is meant the total amount of response obtained from the subject. This is principally a quantitative measure but it includes the level at which the reaction has occurred. Thus, the reaction may be very superfluous, being at the level of the cortex or it may be a much deeper one. The reaction may be nil, *e.g.*, response may be blank or it may be partial consisting of a mere repetition of the stimulus word or a translation of it into the subject's mother tongue or a mere description of what the word signifies.

(II) *Mental State.*—Under this heading are grouped all responses which give an indication as to the state or the structure of the mind of the subject. The obsessive subject may give a response with a strong obsessive bias. A deluded mind may present his delusion in the form of a response.

(III) *Reference.*—This connotes, as the word implies, a reference to a particular dimension in space or time or the self. In this particular kind of response the theme is sharply qualified by time or space or some other factor. It indicates orientation, temporal, spatial or personal.

Each heading was further classified into several sub-headings as follows :—

	Sub-Classification	Example: Stimulus words	Example: Responses
REACTION	1. Nil		No response obtained
	2. Repetition of stimulus words	Box	Box
	3. Translation of stimulus words	Mother	Maa
	4. Paraphrase	Arm	Penknife is a kind of arm
	5. Incomplete	Party	Party is a . . . . .
	6. Descriptive	Box	Made of wood
	7. Cortical	Make	Make or break
	8. Factual	Hard	Iron is hard
	9. Platitude	Success	Failure is the pillar of success

REFERENCE MENTAL STATE

Sub-Classification	Example: Stimulus words	Example: Responses
10. Detached	Vital	Vital forces of nature upset plans
11. Moral	Body	Body should not be polluted by sin
12. Disintegration	Diet	Diet, poison, stars, See, To be dressed
13. Incoherence	Make	In get views order given be the modern in
14. Oddity	Father	It is very difficult to be one
15. Grievance	Worry	People are so unkind
16. Reference to work	Work	I am a carpenter
17. Social	Party	I like to play cards with friends
18. Appreciation	Lead	We are thankful to the Prime Minister for all that he has done
19. Reference to self	Smart	My photograph looks smart
20. Philosophical	Lonely	Solitude helps meditation and brings happiness
21. Immature	Mother	I feel helpless without my mother
22. Pessimistic	Hard	Man is born to suffer
23. Realistic	Wound	All wounds will heal with time
24. Diffidence	Failure	Success is always uncertain
25. Reference to Mental condition	Deeds	I am unhappy because of my actions

The 1750 Word Association responses could be conveniently classified into 22 separate sub-heads.

The 245 TAT responses were classified into 14 different sub-heads.

TABLE 1

W. A. RESPONSES

Nature of response	Control group Frequency	Control group Percentage	Delinquent group Frequency	Delinquent group Percentage
1. Nil	75	4.29	318	18.17
2. Repetition of stimulus words ...	24	1.37	232	13.26
3. Translation of stimulus words ...	0	0.00	106	6.06
4. Paraphrase	1	0.06	77	4.34
5. Incomplete	18	1.03	119	6.80
6. Descriptive	4	0.23	87	4.97
7. Cortical	19	1.05	259	14.80
8. Factual	1,034	59.09	44	2.51
9. Platitude	427	24.40	128	7.31
10. Detached	0	0.00	14	0.80
11. Moral	7	0.40	31	1.77
12. Disintegration	0	0.00	48	2.74
13. Incoherence	0	0.00	27	1.54
14. Oddity	0	0.00	31	1.77
15. Grievance	2	0.11	15	0.86
16. Reference to work	7	0.40	9	0.51
17. Social	30	1.71	53	3.03
18. Appreciation	56	3.20	24	1.37
19. Reference to self	23	1.31	0	0.00
20. Philosophical	9	0.51	1	0.06
21. Ref. Mental condition ...	0	0.00	91	5.20
22. Miscellaneous	14	0.80	37	2.11

Chi square test of significance was applied. The value of x^2 comes to 2219.88 with 21 degrees of freedom and is significant at 1% level.

(2) *Thematic Apperception Test.*—The responses of the experimental and control group were classified as shown below :

TABLE 2

Nature of response	Control Group Frequency	Control Group Percentage	Delinquent group Frequency	Delinquent group Percentage
1. Nil	3	1.22	25	10.20
2. Incomplete	1	0.41	34	13.88
3. Descriptive	3	1.22	13	5.31
4. Cortical	35	14.29	20	8.16
5. Factual	11	4.49	2	0.82
6. Moral	4	1.63	47	19.19
7. Incoherence	0	0.00	22	8.98
8. Social	91	37.14	17	6.94
9. Immature	1	0.41	18	7.35
10. Pessimism	16	6.53	2	0.82
11. Reference to work	26	10.61	0	0.00
12. Realistic	16	6.53	4	1.63
13. Diffidence	10	4.08	0	0.00
14. Miscellaneous	28	11.43	41	16.73

Chi square test of significance was applied. The value of x^2 comes to 245.68 with 13 degrees of freedom and is significant at 1% level.

Inferences

With the small sample selected for study, it is not possible to draw any firm or final conclusion. The experiment would have to be repeated in other parts of the country with larger samples. However, keeping in mind the figures obtained with all the limitations of this experiment, one ventures to put forward some inferences.

Statistical analysis of the responses shows that the responses of delinquents differ significantly from those of normal individuals.

Word Association Test

(1) Considered in bulk, the responses of the control group are more than the delinquent group. The number of nil and similar responses in the case of the criminals is overwhelmingly larger than that in the control group, being 48.63% in the criminals and 6.75% in the normal group. It would be pre-mature to try and explain the mechanism responsible for this variance. It may be that in some

way the criminals are much more inhibited. Their minds may not be as fertile as those of the control group; it may also perhaps reflect a certain degree of negativism or resistance, overt or latent.

(2) Descriptive and Cortical responses are preponderantly more in the case of the criminals than in the case of the control group, being 19.77% in the criminals and 1.28% in the control group.

(3) 84.49% of the responses of the control group could be classified either as Factual or as Platitudes.

(4) Responses denoting pathological changes in the mind such as detachment, disintegration, incoherence, oddities and strong grievances are peculiar to the criminals, being 6.91% in the criminals and .11% in the control group. Could it be that crime itself, at least in the case of a few, is merely a manifestation of a mind diseased?

(5) Again a reference to their own mental condition found in 5.20% responses is peculiar to criminals.

Thematic Apperception Test

(1) The number of nil and similar responses is in the same direction as in W.A. Such responses are 24.08% in the criminals and 1.63% in the control group.

(2) Descriptive and cortical responses in T.A.T. do not show the marked difference observed in W.A., being 15.51% in the control group and 13.47% in the criminals.

(3) A larger number of Moralistic responses is noticed in the criminals in the T.A.T., being 19.19% in the criminals and 1.63% in the control group. This was noticed in W.A. also.

(4) Abnormal responses, *i.e.*, Incoherence, have been present only among the criminals being 8.98%, as in W.A.

(5) Social responses in the case of the control group are in much greater number than in the criminals, being 37.14% in the control and 6.94% in the delinquent group. This is not so in the case of the W.A.

(6) A greater number of immature responses are found in T.A.T. among the criminals being 7.35% in the criminals and .41% in the control group. This is to be expected.

(7) An interesting finding is the greater number of realistic, pessimistic and diffident responses in the control group as opposed to the criminals, being 6.53%, 6.53% and 4.08% respectively in the control group and 1.63%, .82% and .00% in the criminals. It is not difficult to expect the closer contact of the control group with the hard facts of

reality but does it imply that it also makes them pessimistic and diffident? Is this the reason why many escape from reality into the realm of fantasy?

(8) Reference to one's occupation in T.A.T., is peculiar to the control group found in 10.61% of the responses while the criminals avoid talking about their work or perhaps the concept of earning one's bread with the sweat of one's brow is absent from their philosophy.

Summary

This is a study of the differences in the responses of the criminals and the normal human beings. The W.A. test consisting of 50 words and Thematic Apperception test consisting of 7 pictures were used. The experimental group consisted of 35 inmates of U.P. Jails. The control group was drawn from a similar back-ground and educational level. The responses of the experimental and the control groups were classified into 22 and 14 sub-heads respectively. Chi square test of significance was applied to both the classified W.A. and T.A.T. responses. In the case of the W.A. Test, the value of x^2 came to 2219.88 with 21 degrees of freedom and to 245.68 with 13 degrees of freedom in T.A.T. Test. Both these values of x^2 are significant at 1% level.

THE WORKERS' ATTITUDE TOWARDS THE MANAGEMENT

TAPODHAN GANGULY (*Calcutta*)

The conceptual wheel has turned. The concept of " maximum efficiency " has taken the place of the concept of " hard work " in industry. To-day the value of the attitudes and morale of the ' man behind the machine ' is recognised by the industrial world at large. It is actually found that mere improvements of machines do not lead to maximum output of an industrial undertaking. Some factors, other than mechanical, must be responsible for it. The industrial psychologists have established . . . that it is the human factor in industry which largely contributes to maximum production. It is quite in the fitness of things to say that raw materials, developed machineries and loyal employees are the foundation stones, as it were, of all industrial institutions. Out of the human factors, the attitude of the workers towards the management is the most important, because it has direct relation with production. So the study of the attitudes of the industrial personnels towards the management is a master problem of industrial psychology in general. The main object of this present study is to survey the attitude of the industrial workers towards management and also to determine its relation with their respective intelligence, age, education, pay, personality traits, etc. The study also aims at determining how far these factors are responsible for the development of FAVOURABLY or UNFAVOURABLY oriented attitude of the workers towards the management. The findings of such study may have a predictive value for the attitudes of the individual worker.

The principal method adopted in this study is generally called, " Human relation interview ". This survey makes use of a set of questionnaires, suitably prepared for the purpose, which constitute an attitude scale. The questionnaire method is also adopted for the detection of the personality make-up of the workers and their intelligence is measured by a type of concrete intelligence test.

Accumulation of unrests amongsts the workers is the chief cause of the industrial troubles. Industrial accidents, absenteeism, labour-turn-over, strikes and lock-outs, all these are closely connected with labour tension. So in order to remove these sources of troubles from

the industrial world, methods must be followed to ease off the tention. Attitude survey is an instrument, as it were, to measure the depth of employee unrest in an industrial undertaking. Again the attitude of an industrial worker is dependent upon several factors. On investigation, it is actually found that most of the industrial accidents and labour turnover are due to the dissatisfaction on the part of the workers. It is interesting to note further that though the workers are well paid and placed under healthy environmental conditions yet, due to slight misunderstanding, workers' morale goes down which ultimately leads to labour troubles like strike, turnover, etc. So the importance of such studies is beyond doubt for the interest of both the employer and the employee. Attitude survey is important for better understanding and development of morale, the life impulse of industrial organisations.

Earlier Studies

Actually speaking, the attitude study scientifically started just after the first world war. The most extensive studies on this line first conducted by the efficiency committee of the German Industrial Enquiry Board under the direction of Mr. O. Lipmann, in 1929. A committee, consisting of psychologists, economists, etc., conducted by M. L. Putuam was appointed to investigate the cause of a series of strikes occurred in the Hawthorne plant of the Western Electric Company. The works done by Thurstone & Chave, F. J. Roethlisberger, H. Bergen, R. Likert, Newcomb, etc., are of special importance. Recent studies by the Survey Research Centre, Institute for Social research, University of Michigan are also noteworthy.

In India, similar investigations have been made under the auspices of the Department of Psychology, University of Calcutta, since 1947. In order to estimate quantitatively the amount of favourably or unfavourably oriented attitudes of the industrial workers, an attitude scale of Bergen pattern has been constructed by Mr. S. K. Bose in consultation with Prof. S. C. Mitra and Dr. D. Ganguly. This attitude scale was first applied on a group of workers of Tata Iron & Steel Co., Jamshedpur, during 1948, by Mr. Bose and his student.

In this study four forms are used :—

Form No. 1 is the 'personal data sheet' which bears the particulars like name, Department where working, address, mother tongue, socio-economic status, number of dependents, educational level, period of services along with the general appearance, health,

attitude towards this survey, etc., etc. of the workers. Thus Form No. 1 serves *two* purposes—*firstly* collection of informations and *secondly* it helps in the establishment of rapport between the interviewer and the person interviewed.

Form No. 2. "HOW THE WORKERS FEEL ABOUT THESE." This is a questionnaire form for attitude measurement. It consists of 16 statements with a four-point scale. It includes 8 factors, *e.g.*, (1) Behaviour of the superiors towards the workers; (2) Favouritism practised in the plant; (3) Pay and satisfaction of the workers; (4) Non-financial benefits; (5) Encouragement from the authority; (6) Importance given by the authority to the suggestions of the workers, (7) Authorities' trust in workers; (8) Security of job.

Form No. 3 used in this investigation with the heading "Facts about your Likes and Tastes" is really a questionnaire form to determine the personality make-up of the workers, interviewed. The questions include factors like sociability, firmness, straight forwardness, etc. This scale consists of 30 questions.

Form No. 4 used in this study "How quick you can think" is a battery of non-verbal intelligence tests which measure the concrete intelligence of the testee. The modification of the test items and the distribution of time for solving each problem is finally fixed after preliminary application of the test on a number of factory workers.

The workers are interviewed in camera, which provides them the opportunity to open their heart. No officer was allowed in the room during interview. The workers to be interviewed is always received with a smile and is requested to take his seat. Then his token number, whereabouts, marital status, family conditions and other details of the kind are recorded. After this the other forms were applied and the responses were noted with care. In order to establish rapport as well as to remove all doubts of the workers about the aim and object of the present investigation, proper clarifications were made to them. It is also to be noted that precautions were adapted to improve interview.

RESULTS

At first the collected data are tabulated. Then from the overall attitude distribution the range between the minimum and maximum scores is determined to be 32—58. This range is arranged into suitable step-intervals. From the frequency distribution of attitude scores the mean value is determined to be 43.55 and the standard

deviation to be '6'. The percentage of workers whose attitude scores fall between Mean ± 1 SD are taken to be in the neutral zone.

The Table 1 given below indicates the percentage of workers most favourably, favourably, unfavourably and most unfavourably disposed :—

TABLE 1

Attitudes	*Percentage of workers*
(*a*) Most favourable	20
(*b*) Favourable	26
(*c*) Unfavourable	33
(*d*) Most unfavourable	21

The percentage of workers expressed their attitude dispositions with regard to those factors, already mentioned are shown in the Table 2 given below :—

TABLE 2

Attitudes	*Factors*							
	1	2	3	4	5	6	7	8
(*a*) Most favourable ...	24	22	13	26	28	6	16	44
(*b*) Favourable ...	57	57	63	37	24	48	40	42
(*c*) Unfavourable ...	17	20	23	34	42	43	41	14
(*d*) Most unfavourable ...	2	1	1	3	6	3	3	...

AGE AND ATTITUDE

Attempts have been made to find, how far the "Age" factor influences the attitude of the industrial workers. The Table No. 3 indicates the percentage of workers in different age groups favourably or unfavourably oriented.

TABLE 3

	Below 22 years.	23 to 25 yrs.	26 to 28 yrs.	29 to 31 yrs.	32 & up
(*a*) Most favourable ...	13	16	33	22	27
(*b*) Favourable ...	35	21	20	11	40
(*c*) Unfavourable ...	26	37	33	56	20
(*d*) Most unfavourable ...	26	26	14	11	13

PAY AND ATTITUDE

The following table No. 4 notes the percentage of workers in the various pay-groups and their attitude distribution.

TABLE 4

	Below Rs. 75/-	76 to 95	96 to 115	116 to 135	136 up
(a) Most favourable	... 25	17	16	29.5	50
(b) Favourable	... 25	19	33	23.5	25
(c) Unfavourable	... 25	39	33	23.5	25
(d) Most unfavourable	... 25	25	18	23.5	...

EDUCATION AND ATTITUDE

The table No. 5 given below shows the percentage of workers in different educational levels and their position in the attitude scale.

TABLE 5

	No Education	Can read.	Pri. Edun.	VII to X	Matric.	College
(a) Most favourable	... 50	41	28	19	...	...
(b) Favourable	... 25	23	17	17	43	40
(c) Unfavourable	... ...	18	44	38	36	40
(d) Most unfavourable	... 25	18	11	26	21	20

INTELLIGENCE AND ATTITUDE

The following table No. 6 records the percentage of workers showing their attitude distributions as we go up in the intelligence scale.

TABLE 6

	Below 15	16 to 20	21 to 25	26 to 30	31 to 35,	36 up
(a) Most favourable	... 20	28	21	16	...	50
(b) Favourable	... ...	28	26	32	22	50
(c) Unfavourable	... 40	24	35	36	33	...
(d) Most unfavourable	... 40	20	18	16	45	...

PERSONALITY AND ATTITUDE

The industrial workers personality ratio and its relationship with the attitude is given in the following table 7. The number of workers lie in the different categories of personality inventory is given in terms of percentages.

TABLE 7

	Below. 8	.9 to 1.6	1.7 to 2.4	2.5 to 3.2	3.3 to 4	4.1 & up
(a) Most favourable	... 33	18	23	8	13	25
(b) Favourable	... 25	23	31	17	62	12
(c) Unfavourable	... 17	38	34	42	...	38
(d) Most unfavourable	... 25	21	12	33	25	25

No. of Dependents and Attitude

This table No. 8 indicates the distribution of the percentage of workers, grouped according to the number of dependents and their attitudes.

Table 8

	No dependent	1 to 2	3 to 4	5 to 6	7 to 8	9 to & more
(a) Most favourable ...	50	27	17	16	...	14
(b) Favourable ...	17	20	22	30	46	14
(c) Unfavourable ...	17	47	39	27	38	29
(d) Most unfavourable ...	16	6	22	27	16	43

Main Findings from the Results

The results of this investigation are already mentioned, and here small notes will be added to clarify them.

Age and Attitude

The relationship between age and attitude shows that the younger and older persons are more favourably disposed than those belonging to the middle age group. The favourable orientation of the workers below 22 years of age may be explained by the fact that most of them have joined the organisation for the first time and feel happy to get a new job. Usually, they are free from bias against the management of a particular industrial institution when they first joined the service. The workers who recently joined the factory hope for and aspire after a prospective future. These may be suggested as a few possible influencing factors responsible for the favourable orientation of the younger employees.

Increased dissatisfaction among the persons of the middle age group may be interpreted as due to failure in achieving their desired success in life. These workers often find their "Dreams of life" frustrated in the hands of stern reality. In addition to this, the influence of other fellow workers may aggravate their subjective discontents. With the advancement of age the duty and responsibility of the workers increase. Then they realise the actual conditions and try to adjust with the situation and settle in life. An attempt on the part of the old personnels is observed to identify with the management, which we may suggest as the probable cause for their favourable attitude disposition.

Pay and Attitude

Regarding the pay satisfaction among the workers drawing below Rs. 75 per month it may be noted that they are mostly poor and unskilled and have very few wants in life. They do not care much for the social formalities. On the other hand the discontent amongst the personnels of the pay group of Rs. 76 to Rs. 95 per month may be due to their socio-economic status. They have high ambitions too. But fulfillment of their wants need more money. So it is obvious that they will be disconted. The well paid workers show favourable inclination which is usually expected. Though pay has some relation with the workers' attitude towards the management it must be remembered that it is not the only factor influencing their attitudinal disposition.

Education and Attitude

Though the trend of finding is that educated personnels are more dissatisfied, it is definitely difficult to indicate education to be responsible for such fact. The lower level of education of the supervisors often becomes the source of dissatisfaction among the more educated personnels. No body wants to work under a man who is less qualified than himself. Moreover, educated personnels attain a definite cultural level which they find difficult to maintain in the factory conditions. The educated workers are more conscious of their economic and political rights which also may be contributory to their pent up unrest. The workers should realise the dignity of labour which may mitigate the discontent to a considerable extent. It is not a fact that educated personnels are unsuitable for industrial organisations but the proper rank distribution of the personnels is of fundamental importance.

Intelligence and Attitude

An attempt has been made to find out the relationship between intelligence and attitude of the industrial personnels. Intelligence has little influence on attitude disposition as is found in this investigation. Both very intelligent and unintelligent persons are generally favourably oriented. The midium intelligence group vary markedly so far as favourable and unfavourable dispositions are concerned.

Personality and Attitude

The personality scale used in this investigation is altogether different from the normal temperamental tests. We really attempted

to measure the sociability of the workers. The personality Ratio is the value obtained as dividing the positive responses by the negative ones. The indifferent responses are not considered in this calculation. Ratio value increases along with the greater number of positive responses. The relationship between the assessed sociabilities and the attitudinal disposition of the worker is found not to be of much significance.

Dependents and Attitude

Significance relationship is found between the length of the family or the number of dependents and the attitude disposition of the personnels. The growing discontent along with the family expansion may be properly interpreted by economic hardness. The person with a large number of dependents cannot but suffer from economic pressure which we may note as the cause of irritation. The irritation due to the economic hardness is satisfied by scape-goating and expressing the dissatisfaction towards the management. This is one of the psychological mechanisms working in the process of attitude development of the personnels.

Conclusion

The main findings of this investigation not only give a clear picture of the existing attitude and morale of the personnels in the undertaking, but also indicate the root of their pent-up dissatisfactions. It is said that if the diagnosis is correct, the disease is not very difficult to be cured. It is beyond doubt that attitude study has definite diagnostic value at least, so far as the understanding of employees' mind is concerned. From the responses to the different factors affecting workers' attitudes, the points of accumulated unrest are revealed. The management should take proper care to apply right type of incentive which will create interest amongst the personnels along with a feeling of identification with the management.

The systematically collected results do not corroborate with the arm-chair predictions. It is commonly believed that the increased pay is sufficient to develop favourable attitude. But our findings establish that the pay alone is not the controlling factor. The other factors also have some part in the total game. The most significant factor responsible for favourable attitude development is that the workers are very often coldly neglected by their superiors. Their demand is to be treated as human beings in the true sense of the term.

The top-ranking officials think that they can realise the feelings and sentiments of their subordinates better and often do not feel the need to investigate the facts. Such tendency on the part of the superiors should be checked at all cost. The psycho-technician's help is of special importance in connection with the understanding of the workers' requirements, grievances, desires, aspirations, etc. It has been found in this study that education has an inverse relation to the favourable attitudes of the workers. I think that the reason is that when the educated workers are neglected by the authority and do not get proper scope to express their ideas in the forms of suggestions, dissatisfactions accumulate. They take it much to their hearts. The intelligence and personality make-up of the workers also have some relation to the attitude to their management. The management of the industrial organisation should modify their behaviours towards the workers in such a way that will help the workers to identify with the management.

Whenever the proper identification with the management will take place, the dissatisfaction will automatically be mitigated. The present study also helps us to find suitable leaders who may act as medium of communication between the management and the managed. Such leadership should be earned by the individual concern and not acquired as a vested power from the management.

Thus, attitude-study helps us in proper understanding of the workers' mind and the influencing factors affecting attitude of the industrial employees.

The finding of the present study is not sufficient to arrive at a generalisation about the workers' motivation. Further comprehensive works in the line will be, I am sure, of tremendous value in the establishment of better human relation between the employer and the employee.

A PSYCHOLOGICAL STUDY OF THE VARIOUS TENSIONS PREVALENT AMONG REFUGEES RESIDING IN AHMEDABAD AREA

N. L. Dosajh (*Jullundar*)

Introduction

A psychological study of the various tensions prevalent in the country, such as religious, provincial, linguistic and racial was undertaken by psychologists in India under the competent advice of Dr. Gardner Murphy—UNESCO expert. A part of this project was the study of various tensions prevalent among refugees residing in the Ahmedabad area. After about two months preliminary work and through active co-operation of Dr. Kamla Chowdry, ATIRA Psychologist and Mr. I. Dayal, UNESCO Research Associate and with the final approval of Dr. Gardner Murphy, it was possible to chalk out a definite line of action.

The whole plan for the purpose of study was split up into three sections :—

(1) *Questionnaire technique*—A special questionnaire was prepared which includes questions on the economic condition of refugees, their living conditions as regards sanitation etc., before and after partition; migration data; life-history data and attitude probing. For attitude probing, two modern psychological techniques were planned out, *i.e.* Sentence completion test and the famous Word Association test.

(2) *Free interview technique*—The second method employed to study this problem was the so-called free interview technique, that is, the interviewee was prompted to talk as freely as possible on his problems, the data so collected was analysed and recorded.

(3) *Thematic Apperception Test*—This is a special kind of projective technique to study the unconscious factors motivating the conscious behaviour of an individual. This test is a method of stimulation, recording and analysis of fantasy. The original TAT consists of 30 ambiguous pictures which are shown to the subject one after the other and he is asked to make up a story around each one of them. From these stories the various fantasies of the subject are analysed with a view to proving the unconscious subjective factors

motivating the conscious behaviour of the individual. On similar lines the pictures were planned out for refugees so as to study the various tensions exhibited by them, the whole idea was to uncover the unconscious needs, sentiments and conflicts of the refugees, which are not easily obtainable in an interview. This technique and others too go a long way in relieving the tensions of the refugees. Through the phenomenon of projection, the subject identifies himself with the characters in his story and thus gives vent to his pent up emotions which are responsible for setting up tensions in him.

To start with some pictures were selected from magazines, a few snaps were taken and a few sketches were drawn so as to constitute the TAT set. The idea in the selection of these pictures was to elicit the refugee tensions towards their living conditions, the Government, the Muslims, the locals and so on. Briefly the pictures show :—

(1) A boy in a pensive mood.
(2) A local Seth, a few refugees, etc.
(3) Just a hutment—a typical refugee environment.
(4) Some Government officials talking to refugees.
(5) A mosque—some muslims just standing outside.
(6) A picture of some community function (to get their inter-personal relations in the community).
(7) A person clad in ' Khadi ' talking to a few refugees.
(8) A few refugees gathered round the ration shop.
(9) Refugees—taking meals.
(10) A lady, a man and a child—tensions on their faces—a quarrelling scene.

Then free interviews were taken so as to elicit information on the following points :—

I. Migration data

(*a*) Places and dates of migration.
(*b*) History of migration.
(*c*) Persons dead or missing.

II. Occupation and economic status before and after partition

III. Life-history data

(*a*) Town or city.
(*b*) Joint family.
(*c*) Members in the family.
(*d*) Marriage.
(*e*) Children.
(*f*) Inter-personal relations in the joint family (Quarrels, who and why; reaction).

(*g*) Acceptance of religious and social beliefs (Before and after partition).

(*h*) Inter-personal relation in community (Before and after partition).

IV. Interview data about

(*a*) Their attitude towards.

(*i*) Religion. (*ii*) Government.

(*iii*) Muslims. (*iv*) Locals.

(*b*) Political affiliation.

After establishing the report, the individual was made to talk as freely as possible—the interviewer prompting him to talk on the points enumerated above.

The samples were taken keeping the following variables in view :—

(*a*) Time of arrival; (*b*) Caste; (*c*) Age; (*d*) Social status.

Finally the idea was to correlate the TAT data with the data obtained from Free Interview and the questionnaire. But this plan had to be restricted only to the Free Interview Technique for want of sufficient funds.

Back-ground

The total number of refugees residing in various camps in Ahmedabad city and round about was 25898 at the time of study. Most of them were coming from Sindh-side. They mainly consisted of Sindhi Banyas, Bhils and Harijans. Sindhi Banyas comprised the rich and the middle class; whereas Bhils and Harijans constituted the poor class of refugees. Besides these classes of refugees there were others—Sikhs, Jhandawala, Vagharies and Punjabi but they constituted a very insignificant minority. The refugee Camps in Ahmedabad; for the purpose of study may be divided into two sections (*a*) City camps and (*b*) Suburban camps. The City Camps were :—Daryapur, Lalmata, Shahpur, Gujrat Ginning, Hathiwari and Kankira.

The Suburban Camps were :—Kuber Nagar, Vadij, Sabarmati and Ranip.

Their population was as follows :—

City Camps	4560
Kuber Nagar	8738
Sabarmati	7000
Vadij	1600
Ranip	4000
Total ...	25898

(*Note.*—The figures were obtained from the camp commandants of the various refugee camps).

Out of these Sabarmati is merely a transit camp.

History of the various refugee camps in Ahmedabad

After the partition of the country in August, 1947, the people from Western Pakistan started migrating towards this side. Some of them who possessed initiative and enterprise were able to stand on their own legs from the very beginning. Others were helped by various religious, social and political organisations, *e.g.*, Sindh Association, Gurudwara Committee, Congress, Hindu Mahasabha, etc. The early batches of refugees got accommodation in local dharamsalas, etc. Then the Government took over and at Sabarmati some land was acquired from the Railway. The tents were pitched and this became a transit camp. As the people arrived they stayed here and were given cooked food and later on free rations. They stayed for about two days and were then sent to different places according to the vacancies available. Of course, the refugees continued their stay in the transit camp in case there was no vacancy available. In August, 1949, the supply of free rations was stopped except to the widows, the orphans, the old persons and the infirm persons. The Government, however, started giving loans to the refugees for their rehabilitation.

City Camps

Daryapur—This camp was started somewhere in the month of October, 1947. The place belongs to some trust and the Government is paying a rent of Rs. 600. The office of the city camps is situated here—this being the camp nearest to the city.

Lalmata—It is situated just opposite Daryapur camp. The place is provided free by the trustees of Lalmata and arrangement for the camp was made by Ahmedabad Sindh Association.

Shahpur—This is also the property of a trust and is given free.

Gujrat Ginning—This place belongs to some local person and the Government is paying a rent of Rs. 824 for it.

Hathiwari—This camp was started for the old persons, the infirm persons, the widows and the orphans. In this camp free ration is provided by the Government.

Kankria—This camp was started by the refugees themselves on a vacant plot near Kankria tank. The Government built mud-huts for which the refugees are paying Rs. 2 as monthly rent for each hut.

Later the refugees themselves built wooden cabins to which the Government did not take any objection. The people of this place never asked for free ration or any Government help. Now they have formed a Housing Co-operative Society and have asked the Government to acquire this land for them and they intend to build a small colony of their own.

Suburban Camps

Sabarmati—There the displaced persons are accommodated in tents. The first special train of displaced persons reached there on the 19th March, 1948. It started as a transit camp but from the month of July, 1948, it was called as Sabarmati Relief Camp instead of Sabarmati Transit Camp.

Kuber Nagar—This camp was started in the month of February, 1950. It has 1800 pucca tenements. The displaced persons who arrived by the first and second special trains from Nasik were housed here. Some displaced persons were also transferred to this camp from Sabarmati camp for permanent rehabilitation.

Vadij—Here there are pucca hollow blocks. This camp comes under permanent rehabilitation scheme.

Sample

For the purpose of study, the original plan was to study a sample of 100 refugees residing at Kuber Nagar, taking one refugee after every 85 refugees, as recorded in the Block Registers maintained in the Commandant's Office. The work was started on this sample of 100 but this plan had to be abandoned for (*a*) Paucity of funds and (*b*) Shortage of time. So the study was restricted to a sample of 50 refugees taking nearly two or three per block from as many blocks as possible. So the samples were taken just here and there, especially those who were easily accessible. This was done just to expedite the whole research work, though from the scientific point of view the first arrangement is better. Care has been taken in the selection of the sample in including a few representatives of nearly every class and as far as possible according to their population ratio.

The Free-Interview Technique—As already explained, an initial rapport was established with the interviewee. The first ten refugees were prompted to talk quite freely in detail about themselves. The interview material so obtained was analysed and it was found that the areas of tension could be broadly divided into 8 sections :—

Tensions against—(*i*) Government; (*ii*) Muslims; (*iii*) Locals; (*iv*) Living conditions; (*v*) Ration and food; (*vi*) Various political Organisations (*vii*) Mukhies and Chandharies and (*viii*) Other things. Under (*viii*) are included neighbours, other castes, other classes, employees, etc.

In the subsequent interviews, the talk was much directed on the areas mentioned above, the interviewee was prompted to talk on the said area. He, however, was not stopped from talking on other points. The whole interview was, as far as possible, recorded verbatim but in cases where it was found difficult to do so, the interview material was recorded immediately after the interview was over.

The material thus obtained was scrutinized and the sentences showing tension were placed under their respective areas. Then the various statements were rated as :—

(*i*) Showing very high tension	...	...	3 marks
(*ii*) Showing average tension	...	...	1 ,,
(*iii*) Showing slight tension	...	...	2 ,,
(*iv*) Showing no tension	...	...	0 ,,

Rating—In order to make results objective and to eliminate the subjective factor, the rating was done by two raters quite independent of one another.

The sample of fifty consists of—

(*a*) 6 Middle class, illiterate and employed refugees (MIE).
(*b*) 20 Middle class, literate and employed refugees (MLE).
(*c*) 6 Middle class, illiterate and unemployed refugees (MIU).
(*d*) 9 Middle class, literate and unemployed refugees (MLU).
(*e*) 3 Poor, illiterate and employed refugees (PIE).
(*f*) 3 Poor, illiterate and unemployed refugees (PIU).
(*g*) 3 Rich, literate and employed refugees (RLE) for the purpose of classification :—

Rich (R) means one owning a property of Rs. One lac or above in Pakistan.

Middle (M) means one owning a property of Rs. 5,000 to 1 lac in Pakistan.

Poor (P) means one owning a property of below Rs. 5,000. Literate (L) means having a working knowledge of a language. Employed (E) means engaged on some remunerative work.

Findings—The study has shown that the middle class has shown the maximum tension. Out of 41 middle class refugees interviewed, according to the first rater 33 have shown high tension against the Government, 31 against the Muslims, 24 against the locals, 34 against

their living conditions, 29 against ration and food, 30 against various organisations and 23 against the Mukhi; 11 against other things.

The degree of correlation (γ) between the judgments of the two raters comes to :—

	Raters X	Raters Y	X′	Y′	X′²	Y′²	X′Y′
Government	33	30	7	5	49	25	35
Muslims	31	25	5	0	25	0	0
Locals	24	26	−2	1	4	1	−2
Living conditions	34	31	8	6	64	36	48
Ration & Food	29	29	3	4	9	16	12
Organisation	30	26	6	1	36	1	6
Mukhi	23	22	−3	−3	9	9	9
Other Things	11	15	−15	−10	225	100	150
	215	204			421	188	258
					$(\sum x'^2)$	$(\sum y'^2)$	$(\sum x'y')$

A $Mx = 26$
$Mx = 26.9$
$Cx = .9$
$C^2x = .8$

A $My = 25$
$My = 25.5$
$Cy = .5$
$C^2y = .25$

$$\gamma = \frac{\frac{258}{8} - .45}{7.2 \times 4.82} = \frac{32.25 - .45}{7.2 \times 4.82} = 0.91$$

$$\delta_x = \sqrt{\frac{421}{8} - .8} = 7.2$$

$$\delta_y = \sqrt{\frac{188}{8} - .25} = 4.82$$

Further results

1. The middle class employed have shown less tensions than the middle class unemployed.

2. The order of tensions is :

(*a*) According to the I rater:

1. Living conditions (Maximum)
2. Government
3. Various organizations
4. Ration & food
5. Muslims
6. Locals
7. Mukhi
8. Others (Minimum)

(*b*) According to the II rater

1. Government
2. Living conditions
3. Various organisations
4. Ration & food
5. Muslims
6. Locals
7. Mukhi
8. Others

3. Middle literate unemployed class has shown more tensions than the middle illiterate unemployed class.

Observations regarding the effects of interviewing upon the refugee morale :—

1. The reduction of tension is proportional to the extent of the rapport established. The stronger the rapport, the better the results.

2. The reduction of the tension is dependent upon the interviewer's own mental state. The less the tensions in the interviewer, the better the results.

3. The greater the tension in the interviewees, the longer is the period required to reduce them.

PSYCHOLOGY OF MANIC DEPRESSIVE PSYCHOSIS.*

N. N. CHATTERJI (*Calcutta*)

Manic depressive psychosis is an affective disorder in which either elation or depression appears alternately. It was Kraepelin who first recognised that the symptoms like elation and depression are not manifestations of two separate disorders as many of his predecessors believed, but two phases of the same disorder and he gave it the name of manic depressive psychosis. In a large number of cases this disorder starts with the depressive symptoms followed either by manic symptoms or by lucid interval and this cycle would go on uninterrupted throughout the life. In another group manic type of elation would appear first followed by depression and lucid interval. Then there are groups of patients in whom either manic or depressive symptoms would appear at intervals followed by lucid intervals.

Depression could be divided into several grades according to the severity of the symptoms, such as simple, acute depression, and depressive stupor. All the depressive symptoms of the three grades mentioned above could be classified under tried symptoms of Kraepelin such as difficulty in thinking, depression and psychomotor retardation. Many other symptoms may be superadded in some cases such as self depreciation, delusions and suicidal tendency.

Manic symptoms could also be divided into several grades such as hypomania, acute mania and acute delirious mania and chronic mania. All of these varieties are characterised by three main symptoms whose intensity might vary in each case. These symptoms are flight of ideas, elation and psychomotor activity. When flight of ideas becomes very strong patients would go on talking incessantly and their consciousness would be clouded. Many of them would be euphoric in the beginning but it would be disturbed later on due to the development of persecutory delusions. It has been noticed that some manic patients develop paranoid type of delusions and hallucinations and consequently become aggressive, but these symptoms are usually transitory.

* Read before the Indian Science Congress, 1953.

KRAEPELIN'S VIEW

Regarding the aetiology of this disorder Kraepelin believes that heredity plays a very important role in the genesis of this disorder as he has found that 60 to 80 per cent of his cases have got hereditary predisposition. He also believes that in this disorder some kind of metabolic disturbances take place and the illness might be produced as a result of it. In support of this view he has shown that a manic patient's skin becomes very fresh and his hairs luxurious whereas a depressive patient's skin becomes pale and wrinkled, eyes dull and nails cease to grow.

KRETSCHMER'S VIEW

Kretschmer has attempted to differentiate mankind into several types on the basis of their physical built. He has termed the short stocky people with thick neck as ' pyknic ' and believes that this group is liable to develop manic depressive psychosis. Another group possessing thin body and long arms are considered to be asthenic and according to him they are liable to develop schizoprenia. A third group consisting of tall and muscular persons are considered by him as athletic and he believes that they are liable to develop paranoia.

MEYER'S VIEW

Meyer holds that Manic depressive pyschosis is not a disease as such but a behavioural disorder. According to him it is necessary to study all the factors such as infection, metabolic disorder, toxic processes, physical constitution and the life history of the patient for proper understanding of the case. Depressive reaction supervenes in a person because he wants to withdraw from a situation which is overwhelming and he cannot handle it. Excitement or mania signifies a violent rebellion of the patient in response to various difficulties of life. He believes that whether a person would develop excitement or depression depends mainly on the previous habits of the patient and types of reaction to life-situations to which he is accustomed.

ABRAHAM'S VIEW

Abraham believes that depressive persons have fixation in the oral cannibalistic phase and consequently their attitute towards an

object becomes ambivalent. When the object is lost the person makes an identification with it and consequently the sadism that was directed against the object so long would be directed to the self now as the object is no more in the outside world but is within the self as a result of his oral incorporation of the lost object. According to him mania results from the tendency to retribution and retaliation.

Freud's view

Freud in his paper on mourning and melancholia has attempted to explain all the symptoms of mania and melancholia with the help of his psycho-analytical theories. He has accepted Abraham's theory of depression and has given it a more definite form. He has compared mourning with depression and says that depression like mourning results from loss of a love object. In mourning this loss is apparent and the idea of the loss would be in the consciousness but in depression the object might not be really lost in the reality but still one can detect the presence of such idea in the unconscious of the patient. But there is one difference between mourning and depression; a mourner expresses grief whereas a depressed man develops self-depreciation and self-accusation. Freud believes that in depression one part of the ego gets separated from another and judges it critically. This happens as the lost object gets identified with the ego of the person and goes to intensify the primary narcissism. Freud believes that this self-accusation represents not only the sadism of the incorporated object or super ego on the ego but also ego's sadism on the object. In this way the loss of the object becomes transformed into loss in the ego and the conflict between the loved object and the ego is transferred between the criticising faculty of the ego and the ego is altered as a result of identification.

Freud's conception of mania could be described under the following formulations: "When mania supervenes, the ego must have surmounted the loss of the object and the conflict between the incorporated object and the ego. Besides this the mania plainly shows that he has become not only free from the object which caused him so much pain but runs after new objects like a starving man after bread."

Melanie Klein's view

According to Melanie Klein depression is always associated with paranoid anxieties. She believes that both the symptoms appear as a

result of incorporation of objects. Paranoid delusions appear when the patient believes that he is being killed by the internalised object and depression when he believes that he has destroyed the internalised good objects. Her theory of suicide is also different from Freud. She believes that through the act of suicide the patient not only wants to kill the bad internalised objects, but wants to preserve the good ones.

According to her view the specific for mania is the utilisation of the sense of omnipotence for the purpose of controlling and mastering objects. This is necessary for two reasons: (*a*) in order to deny the dread of the objects, and (*b*) to overcome the depression resulting from the fear of death of the good objects. Thus by mastering his objects the manic patient imagines that he will prevent them not only from injuring himself but from being a danger to others.

My view on Manic depressive psychosis

My observations on depressive cases have taught me that main symptoms of depression could be classified under four heads, *viz*, (*a*) fear to face the outside world, (*b*) lack of motor energy which makes the patient a prisoner in his own room, (*c*) inhibition of all the desires, and (*d*) a rebellious spirit expressed through the suicidal tendency and self-depreciation. Cases of depression that I have studied belong to manic depressive group, periodic depression and some showed alternately paranoid symptoms and depression. A few of these cases are psycho-analysed and analytical meterials thus obtained gave us some idea regarding the aetiology of depression.

One of these patients who alternately manifested persecution anxieties and depression was analysed and the mechanism behind these symptoms were found out. His paranoid symptoms appeared in form of persecutory delusion which sometimes became obsessional but ultimately disappeared. His depressive symptoms which were intermittent in the beginning later on became continuous, consisted of lack of motor agility, fear of facing people for which he gave up going out of the house, suicidal tendency and loss of all desires. He said that sometimes he felt as if he did not exist because he did not feel any desire which could lead him to any activity. Sometimes again the world would appear to him as hazy and indistinct as if he was looking at the world through a thin translucent curtain. One session's associations of this patient would be given below and that would give some idea about his symptomology. I am afraid of aggression from the outside world—I fear their cruelty—I can not carry on—It is impossbile—I knew that it would come to this state—I have become a nuisance to my family.

I am afraid of human beings, animals and birds even which were once so pleasing to me—I am afraid to displease them—death only can end this miserable existence.

In the analysis Oedipus desire, the fear of the father and the idea of his impotency came very easily. Castration fear appeared in his associations in a prominent form and the patient reacted to it with the flight to homosexuality. The patient's phantasy to become a woman and his phantasy of submitting to sex act with his father appeared easily and it seemed that repression mechanism did not work very strongly in him. In his further association the mechanism of his becoming a woman also became clear. He expressed the desire of sex act with his mother or mother substitutes and immediately he expressed the fear of castration from his father and the defence he took to overcome this fear was to go into the mother's womb. The idea of going into the mother's womb was expressed openly but it sought satisfaction through the act of being eaten up by the mother or through the act of eating her up. By developing the idea of being in the mother's womb the patient believed that he had become his mother by being merged with her but sometimes expressed the persecutory idea to the effect that his mother wanted to kill him. The idea of going into mother's womb served two fold purposes, *viz.* (1) to protect himself from the castrating father and (2) to get fresh energy from the mother which would enable him to overcome his inferiority in comparison to his father. But as mother appeared to be hostile and an ally of father he believed that she would not give him the energy which could enable him to become superior to his father consequently he was doomed to remain inside the mother's womb. His lack of motor agility and the desire to remain in the bed most of the time was the symbol of this state. His phantasy of looking at the world through the thin curtain which made the world appearing as shadowy was also a symbolic representation of his being in the mother's womb. Mother's body was the curtain which made the world shadowy. Suicide in this state meant the act of making himself free from the bondage of his mother. A dementia praecox patient would also express the phantasy of being in the mother's womb but he would believe that he was dead that is he had become merged with the mother. So he would not develop any aggression towards the mother's body and consequently he would not develop self reproaches or suicidal tendency which are manifestation of patient's aggressive forces which would enable him to come out of the mother's womb.

Patient's phantasy as revealed in the free associations took another turn. He would now express Oedipus desires and he would be prevented from carrying it out due to his father's opposition. But the

patient would no longer fly into the mother's womb for his protection but on the contrary would be aggressive towards his father. The desire of castrating the father and making him a woman would be expressed. He also expressed the oral desire of devouring him as he thought that by this act he would be able to kill his father but he was afraid of being eaten up by his father. He wanted that by eating his father up he would be able to absorb his power into himself at the same time his formidable rival would be killed but he believed that he failed to do that.

His ego was as it were in a fluid state and he would be changed into a new personality with which he would come in contact after he had orally incorporated it. With this phantasy the patient devoloped a faint megalomanic delusion. In another phantasy the patient's ego was comparatively stronger he would not be lost after he had ingested his father but he would remain as a hostile force within the patient. The depressive person's ego remains in this state and fight against the incorporated person goes on as would be expressed through the suicidal tendency and self reproaches. The incorporated father image would now inhibit the patient's Oedipus desires ruthlessly from the within and consequently his free flowing of ideas would also be checked and he would complain of difficulty in thinking. His muscular power which comes from the dynamicity of the wishes would also be lost as there would be no active wish which could energize the muscles.

In dementia praecox incorporation of father image is not so prominent like that in depression and on the contrary the incorporation of mother image or going into the mother's womb is the prominent feature. As mother does not appear to be so much hostile as his father the sucidal tendency and self reproaches are not to be noticed in catatonia. Depressive emotion which is so prominent in depression are not to be noticed in catatonia. Depressive emotions are expressed by a patient when he does not like to sacrifice his masculinity but cannot assert itself due to the fear of the internalised father image. The patient incorporated the father with the hope that his opposition to the son's sex desire would be removed after he had been devoured but to his surprise he found that he not only could not kill his father but the internalised father had become more dangerous toward his sex desires than the external one. For that reason depressive patients are as a rule impotent.

In female patients depression sets in from the inhibition of the homosexual desires. They experience the same opposition from the father when they aspire to satisfy their homosexual love of the mother and they take the same defences of incorporating the father image and going into the mother's womb.

Manic symptoms are produced when the patient thinks that he has got sufficient strength to overcome the internalised hostile father image and can exteriorise him. Most of the manic symptoms show his triumph over his father image. His incessant talks are manifestations of the withdrawal of control of the inernalised father image who once inhibited his thoughts and desires in the depressive state and his excessive motor agility is produced in the same way. His joyful state is the expression of his triumph over his father.

LEVEL OF ASPIRATION AND CULTURE

SHASHILATA SINHA (*Patna*)

Personality varies along its various dimensions. The level of aspiration forms one such dimension. The level of aspiration means that goal-striving behaviour which occurs within a range of difficulty. It may be defined according to Boyd [1] as " an individual's goal or expectation in regard to the goodness of his own future performance in a given task." In other words, it is an individual's ambition in a dynamic situation. Two persons may possess the same absolute amount of ability for a certain task, yet one may set his goal very high, while other may be content to set it near his achievement level. Similarly, there may be still other persons who set their standard very low.

As we know, the formation of personality is a process of socialisation. The level of aspiration in very young children is not found in the true sense of the term. Rather, a very rudimentary aspiration is found in them. Fales [2] found that the child wants to do something by himself rather than with someone's help. This stage, according to him, is characterised as the " rudimentary aspiration," which precedes the full development of it. At this stage the achievement level is not distinguishable. Anderson and Jucknat's [3] findings also show that it increases with age.

The individual as he develops in age, he comes in contact with more and more persons and begins to accept group norms and values. Even the satisfaction of the basic needs is carried out in groups, small or large. In the most primitive social organisations also the individual is dependent on others to some degree, and others are likewise dependent on him. " Equipped with the potentiality of grasping reciprocal relationships and of retaining these relationships longer, the individual builds up more or less lasting psychological effects and mutual sharing." In short, in interacting to secure value objects and situations like food and shelter, new values emerge. These new values, when standardised, come to regulate the very needs that gave rise to such values and norms. These values, again, come from the group in which the individual is born. The group possesses an accumulation of established tools, actions, symbols, concepts and norms. These are at first imposed on the child by the grown-ups. But later on, he assimilates them as his own.

They begin to regulate the individual's behaviour and to set standards of work and attainment, and also new aspirations and goals to follow. Thus a whole "super-structure," as Sherif [4] calls it, of routine, or hierarchical and horizontal roles and statuses, of values and norms arises and becomes standardised. It shapes the individual's tastes, his major tastes concerning objects and situations with which he is in contact in his daily life and ego-involved aspirations to be attained in the way of belongingness, status, and a higher status. This whole process is carried on through contact, by selective perceiving and learning. But all the persons in given culture do not accept the standardised norm in equal amount. The individual's range of socialisation is limited by the range of his receptivity (perceptual range) determined by his actual contact with persons, objects, and situations. It is influenced firstly by the members of his family and then by the members of his in-group, *e.g.*, play group; and by his reference groups like school, college, clubs, etc.

Every culture differs from the others in its group norms and values. These norms and values affect the total behaviour of a person and hence his level of aspiration too. Generally it is assumed that the level of aspiration is a choice situation. Escalona [5] has found that a person choses that activity as his standard which has the greater attractiveness. This means the chosen activity is always a difficult one as the attractiveness or positive valence as he calls it, of a task increases with an increase in difficulty in it. On this basis it may be expected that the level of aspiration should always tend towards the most difficult activity. But this is not the case. The level of aspiration also depends on the subjective probability for a given task, which is largely determined by cultural factors, *i.e.*, by group norms and values. The cultural factors are the frames of reference that set up goals or standards. Measurement of these aspects of the level of aspiration test situation behaviour was done experimentally for the first time by Lewin and Gould.[6]

In a level of aspiration test situation the common procedure is that a subject is confronted with some task and either before or after practice he is asked to make a statement of how well he will do in the task. After failure or success in reaching this explicitly stated goal he is asked to make another estimate. This is repeated several times.

Boyd [7] in his study of the level of aspiration of White and Negro children on an elementary school level found a significant difference in their level of aspiration. The Negro children showed higher level of aspiration. They were found to be also higher in their hopes and ambitions. According to Gould [8] the lower socio-economic group has

the higher level of aspiration. Gould suggests that this is due to the fact that a low socio-economic status is accompanied by a feeling of insecurity. As a group the Negro has a lower socio-economic status than the white American. Therefore, the Negro children, too, have similar feelings and needs. Due to insecure feelings there is a strong desire in them to improve their conditions. Another explanation is given in terms of adjustment to defeats and disappointments. Negro children on the elementary school level may have better defence mechanism against defeats and disappointments than their White school mates. So they set their goal high as a way of compensation. There is also a large amount of " race-pride " in the young Negro. This is perhaps because these children are reared in a society which has been dominated in almost every area by people who are not members of their race.

The effect of group norm on the level of aspiration of the community of Navaho Indians living near Ramah, New-Mexico, has been studied by Bruner and Rotter.[9] In the first part of the test situation, they did not inform the subjects of the norm and hence they showed higher levels of aspiration. But in the subsequent part they were informed of the norm and all of them, then tried to keep their level closer to the norm. Thus they oriented their aspiration round the group frames of reference. The total result showed that there were very few shifts in their level of aspiration. They were found to retain the same level of aspiration regardless of performance. Kluckhohn's [10] generalisation regarding these tribes is based on the cultural factors. He has stated how the Navaho tradition says—" sit tight and perhaps in that way you may escape evil." This means in a new and dangerous situation " do nothing ". This is quite different from the American traditions that say—" when danger threatens, do something." Lewin [11] has suggested that a realistic attitude leads to aspiration close to performance and a flexibility in response to success and failure, *i.e.*, a rise in aspiration after success and a fall after failure. The Navaho may be said to be realistic so far as the first part of the version is concerned, but unrealistic because they showed very little flexibility, as they had very low number of shifts.

Flugel [12] relates the level of aspiration experiments to Freudian theory. He points out that in setting up the goal, much depends on the distance between the real-self and the ego-ideal. The unduly high level of aspiration is due to the hyper-development of the super-ego and the unduly low level of aspiration is caused by hyper-development of the *id* in relation to the super-ego. Here also cultural factors are

emphasized, because the development of the super-ego is also a function of cultural factors.

Thus the reference group is very important factor in determining the level of aspiration of an individual. Reference group may be psychological, too. An individual may belong to a group, but psychologically he may refer himself to a different group and regulate his attitude and apsirations according to that group. A member of the working class or the middle class who consciously or unconsciously relates himself to a higher a class may set his goal according to the higher class. But this is not generally found in highly competitive society like the capitalist societies of America and Europe where the hierarchical arrangement is based on sharp and yet not impregnable vertical class line.

Hyman's [13] work on the psychology of status is also important in this connection, as it provides a corroborative evidence that the standards that people set for themselves are determined largely by reference group to which they relate themselves and that "within each status dimension an individual judgment of his status shifts when reference groups are changed."

All these studies lead us to the conclusion that with all other factors, cultural factors, too, play an important role in shaping the level of aspiration of an individual.

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THE ROLE OF 'ATTENTION' IN THE MOTION PICTURE

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The problem of arousing and holding attention is very important in the motion picture. Analysis by psychologists has indicated a number of factors that have an influence on the direction of attention. All of these factors can, and have been, utilized in the motion picture. If a film-director wants to focus attention on a particular object or situation, the use of one or more of these techniques will be helpful in achieving his goal.

Change of any sort is likely to draw attention. Movement from one position to another is basic in the film situation. On the screen we are shown individuals walking, cars speeding along a road, a flag waving, etc. Studies have indicated that it is justified to conclude that attention will be drawn to such objects more than would be the case if they were still. One study was made on window displays. Six per cent. of the individuals who walked by on one day stopped to see the display. The next day when the display was on a rotation table, 45% of the individuals who walked by stopped to see it. Changes of intensity are also possible in films. The hero walks into a darkened room and turns on the light. With the sound accompaniment of films, changes of both intensity and quality are possible. Footsteps are heard faintly and then become louder and louder. A lullaby changes to a martial air, or the booming of a cannon suddenly stops.

Contrast in color and brightness is another important means of drawing attention. From this point of view, motion picture projection seems to provide conditions which facilitate drawing the attention of the audience. The hall is made dark and only one region, *viz.* : the screen, is left lighted. It is rather profusely illuminated. Physical conditions in the movie theatre thus tend to eliminate diversion of attention and to focus attention on the pictures. In other words, the conditions of motion picture projection offer an excellent opportunity for capturing and monopolizing one's attention.

Attention may sometimes be caught by weak stimuli that would not in a single presentation arouse it, if the stimuli are presented repetitively. The faint sound of tapping at the window might not

draw attention if presented only, once, for example, but might be highly effective if repeated a number of times.

Another factor has been given the name of striking quality. When two stimuli are of the same intensity, one of them may be more attention-catching than the second. A high sound has greater striking quality than a low sound of the same physical strength. The color red catches attention more readily than, say a pastel color.

Social suggestion may also be utilized in attracting attention. In the case of films for example, if the hero looks at a certain object, it is likely that the audience will look at it, too. If the hero reads a letter in his hand, the audience can be expected to pay attention to the letter.

Appeal to motives of the individual is a further factor in catching attention. In the movie situation, such appeal must be rather general in nature. Pictures of topical interest are frequently made in order to draw people to the theatre but in addition to this it is possible in the film itself to draw attention to particular scenes by references to common desires, interests, or problems of the day.

The motion picture can utilize these various techniques for drawing attention. It is also in a favourable position, from the technical point of view, for holding attention. Studies have shown that a stimulus can call forth attention, but cannot hold it for long. Attention will fade away within a short time. To hold attention, it is therefore necessary that at the point of its fading away, there should be a change of stimulus to revive it. The quick change of shots, which is so characteristic of the motion picture, serves in a way to hold attention. New shots go on impinging on the audience continually to restore declining attention.

Attention is of two types: voluntary and involuntary. With the voluntary variety we attend to things because we want to do so. We listen to the radio for a while to find out what is going on. We look at the different faces in a party to see if there is any familiar face. As far as films are concerned appeal to voluntary attention is probably made largely in terms of the kind of story involved, though it is true that some individuals may be so interested in technical details of dramatic or cinematographic production that their voluntary attention will be directed toward them.

In the case of the involuntary variety, we attend to things even though we do not want to. The stimuli are as if thrust upon us. Change, intensity, repetition, contrast, striking quality, and social suggestion are all factors that may be used by the film producer to facilitate the drawing of the audience's attention to points that he

wishes to single out and emphasize. Among the actors, one who is speaking is likely to draw our attention. But, if he is rebuking somebody, our attention (through social suggestion) is likely to go to the latter. We cannot but attend, it seems, to a quick action, a glaring object, an usual dress. Our attention is, as it were, carried independently of our volition from one place to another, from one person to another.

The good motion picture not only uses these various devices for attracting attention in particular directions, but also is careful to analyze the situation so that it can satisfy interests and motivations aroused and thus heighten voluntary attention. The hero gets a telegram. We at once want to see what is written therein. In the next moment we see a close-up of the telegram. While taking out the handkerchief from his pocket, the man unknowingly drops something on the floor. We at once want to see what that is, and a close-up of the object is given on the screen. We see a man staring through the window. We, too, want to see what he is looking at, and the next shot shows a couple of birds on the branch of a tree. The effective motion picture thus uses various devices for arousing involuntary attention to heighten interest in the subject matter and to strengthen voluntary attention.

In summary, the role of attention in the motion picture is of considerable significance. The showing of the film in a darkened theatre and the movement that is such an integral part of the situation provide an attention-producing basis for movies. In the production of films, it is possible to take advantage of numerous devices for attracting involuntary attention. Furthermore, the film producer can shape the film to meet the interests aroused by such devices to heighten voluntary attention.

NEW HORIZONS IN CLINICAL PSYCHOLOGY

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The advent of clinical psychology as an independent discipline within the frame-work of the mental sciences is recent one. It is mainly during the period of two World Wars that psychiatry and kindred fields of study have come to acquire an independent status, and attract increasing attention at the hands of the medical profession and the public in general.

Prior to the discussion of some of the important developments—it shall be mainly confined in this paper to those of Dynamic Psychology—which have taken place in the field of clinical psychology, it is pertinent to describe the meaning and the present day status of this important branch of psychology. There is no consensus of opinion among modern psychologists regarding the definition and scope of clinical psychology. Medical psychologists, all agog to close the frontiers of the medical world in the treatment of illnesses, whether physical or mental, to those who are medically un-initiated—regardless of their scientific calibre and professional position—are particularly emphatic on describing clinical psychology as a branch of psychology, which is primarily concerned with the study and evaluation of the personality organisation of the individual, through various mental tests and psycho-diagnostic procedures. The thereapy and the care of the mentally ill patients, according to them is the exclusive prerogative of the psychiatrists alone. Psychologists, on the other hand, stoutly contest that their claim to the study of human behaviour, whether in its normal or abnormal aspects, is a legitimate part of the psychologists' functions. This not only includes the study of the methods of diagnosis of the personality problems but also their treatment.

In view of the above, no clear cut definition of the word clinical psychology is available at the present time. Its meaning and scope is mainly interpreted in the light of the scientific bias, or, professional affiliations, of the individual research-worker, or a clinician. Because of the semantic difficulty in defining the meaning of the term clinical psychology, the functions of the clinical psychologist and the psychiatrist are far from clear. Thus some of the medical writers refer to psychiatrist at times as a clinical psychologist, assuming at the same

time that he is a medically qualified person. Others, as mentioned earlier, wish to strictly reserve the term clinical psychologist for non-medical psychologist, who through his special training and experience assists the psychiatrist, in detecting any deviation from what is generally regarded as normal. But the difficulty in arriving at a satisfactory conclusion concerning the precise field of work of the clinical psychologist is a practical one. The mainstorm of controversy between psychologists and psychiatrists seems to centre round the issue of the practice of psycho-therapy.

Zilboorg,[1] a well-known American psychiatrist, makes a vitriolic attack upon those psycholoigsts, who are in any way connected with the psycho-therapeutic treatment of nervous disorders, thus, " Any attempt on the part of a psychologist to treat and to care any sick person is charlatanism, no matter what cloak of respectability he may wear. One of those cloaks is frequently called " re-education ", as if a neurotic or a psychotic (the common and incorrect term is " insane ") is neurotic or psychotic by virtue of improper education. And even if improper education were actually the cause of mental illness, it does not mean that individual thus afflicted can be taken in hand like a cloak, turned back, and reset by some sort of re-education. Whatever the cause, the treatment of consequences is a highly specialised business. The pyschologist can never make a differential diagnosis between a purely physical and a psychological affliction, because he is not trained in medicine or psychiatry, no matter how long he may have been in the neighbourhood of and in loose contact with mental hospitals and patients. Mere intelligence and a good knowledge of academic psychology do not provide him with true knowledge of sick human being."

Psychologists engaged in the field of clinical work would strongly challenge the above-mentioned indictment of Zilboorg. They would argue that he makes, or, would like to make, little distinction between psychologists with a background only in academic psychology, and those who in addition to their high academic qualifications have also acquired special clinical training in the techniques of diagnosis and treatment of nervous ailments, of equivalent standard, as provided in any recognised psychiatric institution. The training of the non-medical psycho-analysts in Great Britain is a case in point.

Freud [2] throughout his scientific career took the firm stand that, " it is no longer possible to restrict the practice of psycho-analysis to physicians and exclude laymen from it. In fact, a physician who has not been through a special training is, in spite of his diploma, a layman in analysis, and non-physician, who has been suitably trained can,

with occasional reference to a physician, carry out the analytic treatment not only of children, but also of neurotics." In order to protect the interests of some of his well-known non-medical pupils, and those who were planning to undergo psycho-analytical training in future, he gave a clear-cut exposition of his views on this issue in his book, "The Question of Lay-Analysis." With the weight of his authority and prestige in the Scientific World, he was able to influence the policy followed in the training of candidates at a number of psycho-analytical institutes in the world. In England, the British Psycho-Analytical Institute, accepted the principle of training of non-medical trainees, provided they fulfilled certain essential requirements, namely, the candidates must possess high academic qualifications—a post-graduate university degree in psychology, or its equivalent, with suitable clinical experience,—and on qualification should, "undertake to treat only those patients who are referred to them by medical practitioners who agree to take medical responsibility for the case."[3] Thus for all practical purposes the alleged danger inherent in the practice of psycho-therapy by lay persons, because they are unable to distinguish between the physical and mental aspects of an illness, so often emphasised by the medical psychologists, is fully guarded against. Regardless of the realistic grounds on which the psychiatrists base their claim to restrict the treatment of mental illnesses through psychological methods to themselves, the vehemence and the vigour with which they wish to treat it as a 'closed shop', apparently savours of too much of emotionalism and nervous agitation on their part.

This is quite obvious from their attitude of ambivalence which they maintain towards those psychologists who practise psycho-analytical therapy in particular. Although on point of principle the psychiatrists like to restrict training and practice in psycho-therapy to physicians who have qualified in this branch of medicine, yet indirectly they do recognise and make use of the outstanding contributions which some of the non-medical psychologists have made, dealing with important issues and problems of psychiatry, psycho-analysis and allied fields of studies. The greatest tribute is paid to them in this connection by some of the leading personalities in the medical profession.

Such a celeberated medical authority as Dr. Ernest Jones,[4] the importance and value of whose pioneering contributions in psycho-analysis are admitted on all hands, writes in his perface to Ella charpe's, "Collected Papers on Psycho-Analysis," "He (Hans Sachs, a prominent non-medical psycho-analyst) and she belonged to the galaxy of brilliant lay-analysts who demonstrated that, however desirable a medical qualification may be, it is possible for exceptional persons from

other callings not only to master the theory and technique of psycho-analysis but to make important contributions to our knowledge of it. Both became leading teachers in that subject (' training analysts ')."

It is a well known fact that in various international congresses on Psychology, Psychiatry and Psycho-Analysis, psychologists have made eminent contributions on subjects which would be regarded by some of the die-hards amongst psychiatrists to be the exclusive preserve of their speciality. Some of them have even been provided with high teaching positions in medical institutions, which, strictly speaking, would have been reserved for persons with distinctive medical qualifications. Hans Sachs, whom Jones refers to in his perface to Ella Sharp's, " Collected Papers on Psycho-Analysis," quoted above, was the first non-medical psycho-analyst to be elected a member of the Harvard University, Medical Faculty, and appointed as a training analyst at the Boston Psycho-Analytical Society. This shows that psychiatrists are far from clear in their minds as to what extent they shall be willing to accept and co-operate with those who do not form a part of their fraternity, and are merely free-lance practitioners in a field, in which, according to them, they lack any professional bona-fide.

A few of the more indulgent ones would like to limit the role of non-medical psycho-therapist to the treatment of normal problems, and in a subsidiary capacity assisting in the work of the psychiatrist. This again, is a further clouding of the issues; for according to consensus of modern psychiatric opinion, the frontiers dividing the normal from abnormal are extremely nebulous and vague; both seem to shade off imperceptibly into one another.

Perhaps, one may agree with Lindner,[5] when he deals with the serious dilemma that is now-a-days facing the clinical psychologists, and in which conflict the valuable energies of both psychiatrists and psychologists are being frittered away in specious and unproductive wrangles and quibbles. His main emphasis is upon the care and vigilence which need be exercised in the training of psycho-therapists. According to him, university qualification in medicine and psychology is no guarantee for the suitability of the would-be psycho-therapist. The clues which Freud gave in " The Question of Lay-Analysis " Lindner, states, may be taken as some of the essential pre-requisites for the calling of a psycho-therapist, namely, " capacity for self-abnegation and self-control based upon the achievements to the closest possible degree of the Socratic injunction to self-knowledge, high integrity, patience, experience of life and its forms such traits resolving into a gestalt which cannot be covered nor replaced by the medical or any

patent, and without which the practice of this exigent art is unthinkable."

Regardless of vociferous denunciation and sabrerattling on the part of the custodians of medical interests and rights against psychologists, as far as the practice of psycho-therapy is concerned, the fact remains that in one form or another they shall engage themselves in studying the problems of human personality and prescribing treatment thereof. We may conclude the discussion of this important issue by quoting the remarks of Wolberg,[6] a well-known American psychiatrist, "If psycho-therapy is ever to develop into a scientific discipline, and if we are ever to bring facilities within the bounds of community needs, it is mandatory that a solution be found to the differences that exist between medical and non-medical people in the field of mental health. Reciprocal respect and tolerance are essential before we can even begin to approach the problem constructively. A solution will be found provided that we all work with instead of against each other."

Such an approach is all the more imperative at the present time, because a budding science as clinical psychology is, its further progress and development is likely to be adversely affected if the current internecine warfare between such professional people as psychiatrists and psychologists, who mutually share the responsibility for its existence, were to continue unabated, without an immediate truce being in sight. In countries where the provisions for catering to the mental health problems of the community are so hopelessly inadequate—a special mention need be made here of India—much of the valuable energy may be vitiated in such fatuous and useless scientific polemics, which could be advantageously utilised in promoting better standards of emotional health, both in its preventive and therapeutic aspects. Psychiatrists and psychologists need recognise the important fact that they are members of a team in which the work of one supplements and is supplemented by the other. To attempt to exist apart on the part of the constiuent members is to undermine the foundation of the very structure on which the present day science of modern Dynamic Psychology stands.

In the foregoing pages an attempt had been made to evaluate the present status of clinical psychology and some of the pressing issues it has to deal with as it is struggling along to carve out an independent existence for itself, guaranteeing an individuality and standards of growth in conformity to its particular demands and requirements. We shall, now, describe some of the fundamental developments that have recently taken place in the general field of Psycho-Dynamics and Psycho-Therapeutic during the last few years.

The most outstanding and Dynamic change in the medical view point that has been ushered in, since World War II, is to study and treat human illnesses in the totality of the setting in which they occur. Although the word, " Psycho-Somatic," applied to this approach, is new, the medical attitude that it describes is as old as the art of healing itself. The modern view point is to be contrasted with the earlier methods of diagnosing and treating diseases, only in the greater emphasis that it now gives to the personality of the patient as it operates within its social context. In the light of this, note is taken of the fact that man being essentially a social animal can be best studied whether in health or illness, only in the social setting in which he lives, and his environment in turn may be modified by the emotional endowment which he carries along with himself from the earliest years of his life. This method of study and treatment of diseases, as mentioned earlier, has come to be known by the generic terms of " Psycho-Somatic Medicine."

Psycho-Somatic medicine not only aims at understanding the interrelation and interaction of psychological and organic factors in the aetiology and course of an illness, it also concerns itself more generally with the influence of emotions on bodily functions and the influence of organic disturbances on mental functioning. Thus its scope is not confined to illnesses in which emotional factors play an important part in the aetiology of the disease—the so-called functional disorders—but it also encompasses the study of those diseases which are avowedly organic in their nature, recovery from which may be greatly influenced by the presence of favourable mental factors. As Hilde Bruch [7] puts it, "from this point of view illness represents the totality of reactions with which an individual responds to the difficulties of living."

While it is true that Psycho-Somatic approach may provide the basic orientiation to all aspects of modern medicine, it is only in the case of a few notable organic illnesses that specific role of emotional factors, both from the aetiological and therapeutic view point, has been investigated in detail. Prominent among these are, peptic and duodanal ulcers, mucous colitis, heart disease, hypertension (high blood pressure), asthma and hay fever, and some of the well known skin diseases. Rheumatic troubles and diabetes have also been brought under the spot-light of scientific research, to determine how far emotional conflicts are responsible for their onset and course. The present writer,[8] for example, during his 3½ years research in England on " The Personality Background in Pulmonary Tuberculosis," primarily concerned himself with the role of Psycho-dynamic factors involved in this grave illness.

This fact has been long recognised that psychological causes play an important part in the aetiology, onset and reaction to pulmonary tuberculosis, but, so far as their pathogenic role has been concerned, various writers—with the exception of a few modern ones—mainly dealt with this theme on a purely descriptive basis. The above referred to research led the author to the following conclusions, which may be of interest to mention here :—

(1) That pre-morbid personality of the tuberculous patients has a major significance in the aetiology, onset and reaction to the disease.

(2) That the chronic repressed emotional conflicts originating in a very early period in the lives of patients play a contributory role in both lowering the resistance of these patients to infection and reactivation of dormant lesion from which they might have suffered in their childhood. On the other hand the existence of unhealthy environmental conditions, whether special or economic, no doubt, may also make a person prone to tuberculosis.

(3) That emotional conflicts connected with passive dependent wishes and aggressive trends are the landmarks of the psycho-pathology of tuberculosis. In this respect the psycho-dynamics of pulmonary tuberculosis bear a close resemblance to the findings of other workers in the general field of ' Psycho-somatic Medicine.'

The most outstanding and thorough going researches which have been conducted in recent years in the application of the facts of the clinical psycho-pathology to problems of internal medicine are those of Franz Alexander [9] and his associates at Chicago Institute of Psycho-Analysis. Alexander, too, has noticed that " the conflict between the help-seeking and self-assertive rivalary has been found to be the nuclear conflict in such widely different conditions as neurotic criminality and some types of psycho-somatic disease." Not only an attempt is being made by him and his colleagues now-a-days to delineate the important role of personality conflicts in the precipitation of an illness, but also to discover the specificity of emotions in a particular disease—syndrome.

In the case of ulcers of the stomach, this complaint is generally found among people representing a personality type in which there exists a strong unconscious conflict between the need of love and the fear of dependence. Outwardly such persons show themselves to be typical " go-getters," ambitious, overbusy and extra-energetic, but underneath their facade of self-sufficiency and self-reliance there is a persistent craving to be dependent upon someone, to be looked after by others as far as their personal needs are concerned. In conjunction with other physical factors, such as constitutional pre-disposition,

indiscretion in diet etc.,—the latter may to a great extent be caused by their excessive self-drive and emotional restlessness—the emotional factors in their personality make up become an important contributory agent as far as onset of their illness is concerned. Abundant evidence has been provided of the fact that these persons have long periods of remission from their illness when they are able to utilise the self-understanding provided of their deleterious personality trends in a course of psycho-therapeutic treatment. Relapses and re-emergence of the former symptoms of their complaint seem to be directly correlated to their negligence in adjustment to the inner conflicts existing in their personality structure.

The aetiological contribution made by psycho-dynamic factors in other disease-entities is no less significant than in the case of stomach ulcers. In Essential Hypertension, the conflict over hostile and aggressive impulses is most prominent one. The word "hyper-tension" itself denotes that the patient is labouring under some sort of tension. The patients suffering from high blood pressure, studied psycho-analytically, apart from their physical pre-disposition to this trouble, showed that they were under the pressure of strong hostile and aggressive feelings within themselves. The more they had to control and inhibit these impulses in their personality, the more emotional strain increased in them. At the point of their particular constitutional weakness—their organic susceptibility to vaso-spasm—they broke down with the complaint of "Essential Hypertension." This is a typical instance of "Organ inferiority and personality factors combining to bring about the onset of a particular illness."

Exigencies of space limit our going into details regarding the important part that mental conflicts play in other organic diseases, exhaustive studies of which have been made from a psycho-somatic angle by leading investigators in this field. As methods of scientific observations improve and the collaboration between psychologists and psycho-analytically trained psychiatric research workers grows, the general field of psycho-somatic investigation into some of the complex problems of internal medicine shall further widen in its scope and dimensions. Holistic, psycho-somatic approach may eventually succeed in bridging the gap which at present exists between the natural and social sciences.

Psycho-somatic method of diagnosing and treating the diseases, as we have noticed, is the most recent methodological advance in modern medicine. But in view of the large-scale psychiatric casualties in the last World War, and ever increasing number of patients suffering from

emotional mal-adjustments in the present day world, a pressing need is felt among all thoughtful and discriminating psycho-therapists that such technical tools of therapy need be devised which should help meet the existing demands of the community for psychiatric help. "Brief psycho-therapy" is a development in psychological medicine in this direction. If psycho-analysis is a treatment for only a select few, brief psycho-therapy is the therapy for the masses.

Terhune [10] in a noteworthy paper read at the International Congress on Mental Health (1948) admirably sums up the factors which led to the development of psycho-therapeutic techniques, aiming at maximum results within shortest period. "With the widened scope of psycho-therapy and the recognition that a large part of world population needs psycho-therapeutic re-orientation, it is apparent that the formal analysis is often too expensive, too time consuming, and that there is an insufficient number of physicians to administer such treatment. These exigencies necessitate a reformulation of our methods. Psychiatrists have somewhat been justly accused of living in ivory towers, isolated from the lives of their patients. Experience in the Military service and more active participation in the psychiatric problems of civilians, however, have jarred them from their citadels, and given them a clearer understanding of the pressing needs of their patients. They now recognise that it is brief psycho-therapy or nothing for the majority of those who need treatment."

Psycho-analysts or psycho-therapists practising a more intensive form of psycho-therapy have either taken scant notice of the development of this newer approach in treating emotional disorders, or have disdainfully turned it down as an insufficiently deep and thorough in its methods. But the preponents of brief psycho-therapy take the stand that it functions essentially within the frame-work of principles of Dynamic Psychology initiated by Freud; it requires the highest possible training in clinical methods of the therapists who employ it, and it is a form of treatment which is planned, eclectic and elastic to the extent that it may restore the patient to his former state of emotional health and well-being with maximum economy in time. The patient may undergo this type of therapy for a period of three to eight weeks. As regards the frequency of interviews, as a rule, the patient may be seen three times a week. But in the case of a few suitable patients twice a week or weekly sessions have also produced good results. Those patients who may not benefit much after a course of brief psycho-therapy may be prescribed formal psycho-analysis or any other form of intensive psycho-therapy. Thus brief psycho-therapy need not prove an unforeseen obstacle in the case of patients who can only be helped

STUDY OF THE VOLUNTARY MOVEMENTS RECORDED BY DYNAMOMETER AS MODIFIED BY PLEASANT AND UNPLEASANT STIMULI AMONG THE NOLUAS OF BENGAL

M. N. Basu (*Calcutta*)

The Noluas of Bengal form a socially compact group scattered over four districts (Jessore, Khulna, Faridpur and Nadia) of Bengal, manufacturing mats from reeds. Their total numerical strength is 1,704, of whom 884 are males and 820 females. From the somatometric and somatoscopic points of view I have found that they are a short-statured, mesocephalic, mesorrhine, wavyhaired and dark-brown complexioned people.

The amount of muscular strength (*i.e.*, the amount of pull measured in kilograms) never remains constant and we are to see whether the amount varies with the variation of the affective consciousness, *i.e.*, we have to see whether pleasant or unpleasant stimuli have any effect upon the muscular strength or muscular fatigue.

The following appliances were used in carrying out this experiment on 200 Noluas, age varying between 22 and 30—a Collin dynamometer, metronome for carrying out the experiment uniformly at an equal number of interval, a stop watch for time, pleasant and unpleasant smelling bottles (a scented cocoanut oil and ammon-chlore in two test tubes). The metronome was regulated so that it gave 120 beats per minute by a stop watch. The Collin hand dynamometer is an instrument which is used in studying the muscular fatigue. It registers the squeeze or pull of the hand or finger against a steel spring. It may be used in two ways : either to record the maximal force of a momentary muscular contraction under varying conditions, or to record the variations in that force when prolonged effort is made to maintain a state of maximal contraction. In this experiment I will consider the first one.

The subject was asked to close his eyes and to take his seat as comfortably as he might think best for muscular exercise. He was then instructed to pull the handle of the dynamometer with one beat of metronome and release it with another and so on in a rhythmic fashion with the sound of the metronome. He was then instructed to pull the

handle of the dynamometer with one beat of the metronome and release it with another and so on in a rhythmic way with the sound of the metronome. He was asked to exert the maximal pull and that very uniformly when the signal would be given.

The following cautions were taken into account during the experiment :—

(*i*) No pain in pulling.
(*ii*) Handle was covered with soft velvet.
(*iii*) Readings were taken in the same posture.
(*iv*) Proper practice was given to the subject.
(*v*) Sufficient rest was given after a few readings.
(*vi*) No suggestions were given to the subject about the result.
(*vii*) Passivity of the mind as to the nature of the pull.
(*viii*) The idea of competition was completely given up.

The following table shows the result of a particular individual :—

Table I

No. of Expt.	Seconds	Muscular strength in Kilos Right	Left
1	1st	48	46
2	2nd	42	
3	3rd	43	42
4	4th	47	44
5	5th	42	39

Hence the average strength of the right hand is 44.4 kgs. and that of the left is 42.2 kgs.

The average strength in kgs is arranged according to age in the following table :—

Table II

Age	No. of Cases	Average Strength (kg) Right	(kg) Left
22	20	41.5	38.8
23	15	41.9	39.4
24	20	42.6	40.1
25	25	43.0	40.8
26	26	44.6	42.6
27	24	44.8	42.6
28	22	45.1	43.0
29	27	46.2	43.8
30	21	47.3	44.1

The average strength of 200 Noluas is 44.1 kgs in right hand and 41.6 kgs in the left.

The average strength in kgs when pleasant and unpleasant stimuli are persented to the subject separately, is arranged according to the age in the following table :—

Table III

Age	No. of cases	Average Strength Pl. St. Right (kg)	Left (kg)	Unpl. St. Right (kg)	Left (kg)
22	20	42.0	41.0	37.5	35.8
23	15	42.7	41.3	38.0	36.2
24	20	43.1	41.9	38.5	36.8
25	25	43.9	42.0	39.7	37.2
26	26	45.4	42.8	41.0	39.0
27	24	46.0	43.5	41.5	39.5
28	22	46.8	43.8	41.9	40.2
29	27	47.6	44.0	42.1	40.8
30	21	48.1	45.8	43.2	41.6

The average strength of 200 Noluas when pleasant stimulus is given, is 45.0 kgs in right hand and 42.9 kgs in the left; and the average strength of the same number of Noluas when unpleasant stimulus is given, is 40.3 kgs in right hand and 38.5 kgs in the left.

Hrdlicka in normal old Americans using the same type of instruments and applying the same method found the average strength 41.8 kgs of the right hand in the males. For further comparison I will take the following data on male students of Brno, secured by V. Suk :—

	Average Strength Right hand (kg)	Left hand (kg)
University students (Teacher's College for Physical Education) Average age 22 years	44.0	40.8
High school students (college) Highest class, average age 19 years	38.3	35.3
High school students (college) the last but one class average age 18 years	38.0	33.1
Natives from Natal and Zulu land, age 20 years and above ...	29.5	27.8

Thus we see that the average strength of the Noluas is greater than those in the above list. Experimenting on the Noluas it is seen that pleasantness and unpleasantness play some parts.

At first the subject felt no inconvenience to exert his maximum strength, after a while he was seen to lose his strength. The pleasant stimulus was liked very much : there was afterwards a tendency to take a deep breath. The unpleasant stimulus was nauseating; sometimes there was a tendency of jerking.

The subjective source of error in this experiment is that the subject was less attentive to his work than to the stimulus. A very pleasant stimulus usually causes an initial drop, followed by a significant rise of strength; an unpleasant stimulus, on the other hand, usually causes a decided fall of strength.

The experiment further reveals that things which are biologically good (pleasant stimulus) would make us strong and things which are biologically bad (unpleasant stimulus) would make us weaker.

Suk says that 'this seems to give satisfactory evidence that muscular strength depends not merely upon the muscle, but also on intelligence. It is hardly possible to arrive at a satisfactory explanation of this mental relation to muscular strength without admitting that cerebral impulses to the muscles may be stronger in one case than in another according to the individual's degree of general intelligence or cerebral potentiality.' *

* V. Suk—Muscular strength—Studies on South African Negroes (American Journal of Physical Anthropology, Vol. X), p. 60.

A SYNOPSIS OF AN EXPERIMENTAL ATTEMPT ON THE STUDY OF PSYCHOLOGY OF RUMOUR

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INTRODUCTION

The report of an observer when it passes through the mouths of a number of people, undergoes some change. It is exaggerated, distorted or skeletonized. When the actual news is reported in a totally different form, we call it a rumour. Rumour plays an important part in our social life. If we study the real cause of this change in the actual news, we find that the change is due to the individual reporters, who have reported the news successively. Every reporter gives expression in his own way and thus brings the change in the news.

PROBLEM

The present paper reports the result of an investigation which attempted to study how an actual news or an observer's report is changed when reported by some persons one by one.

PROCEDURE

The method used in these rumour experiments is described as follows. The group on which these experiments were carried out was small.

Three pictures and three stories were used in these experiments. In the experiments with pictures the following method was used. The picture was presented to a subject for about sixty seconds. He was asked to observe it very attentively and remember what he could. Then the picture was removed from him. Then a second subject was asked to enter the room. The first subject was asked to describe the picture to the second subject. The second subject was asked to describe it (what he heard from the first subject) to the third subject. In this way reports were taken from six subjects. In the experiments with stories the same method was followed. The story was told to the first subject and he was asked to hear attentively and remember as accurately as he can. Then a second subject came and

was asked to hear it from the first subject and tell it to a third subject and so on. When the experiment was over, the versions from first to last person were presented before the subjects. They realised the gradual transmission and it was a matter of great amusement to them.

Three groups of students were used. They were the post-graduate students of Psychology and Philosophy and under-graduate students of Psychology aged 19 years to 24 years. The subjects were all interested in the experiment and they enjoyed it when I explained them the motive of my experiment. Experiment with story 2 was done with the M.A. Examinees (1952) of Psychology.

THE PICTURES USED :

Picture I.—An accident scene, taken from Freyd's (1921) picture test, with a slight change consists of 25 details.

Picture II.—A propaganda picture of the leftists during the period of election, with 16 details.

Picture III.—Was a home scene of a Bengalee family with 15 details.

STORIES USED :

Story I.—Was a travelling story consisting of 96 details.

(Taken from children's magazine).

Story II.—Ego involved story. It was discussion among the students who were appearing in the M.A. Examination (1952) about their ensuing practical examination. The story consists of 45 details.

Story III.—Was a Ghost story with 80 details.

(Taken from children's magazine).

The criterion used for saying what is a detail and what is not, is the importance of an item or remark for the meaning of the whole story.

For example—'গুপ্তিপাড়া প্রাচীন বিখ্যাত গ্রাম' contains four details. The sentence indicates the name of the place, what sort of place it is, the fame of the place and that it is a village. If instead of প্রাচীন the word আধুনিক is used, it makes difference in the meaning of the sentence.

In case of pictures the criterion of detail is taken in a different way, *e.g.*, in picture II, নির্বাচনের প্রচাররত কর্মিবৃন্দকে দেখা যাচ্ছে has been taken as one detail.

The instruction given to each subject was as follows:—"Listen to the story attentively and before they told the story they were instructed, 'Tell what you have heard as accurately as you can".

The subject was shown the picture and was asked "Here is a picture, I want you to study it carefully and then describe what is happening in it".

Treatment of Results

The successive versions of the various stories and pictures were collected and analysed in order to see what changes had taken place both in number of details recalled and in the matter of story and the picture.

The process whereby the original story is simplified due to gradual omission of material is described by Allport and Postman as 'levelling,' that of certain incidents becoming dominant with the others grouped around them as 'sharpening', while the rationalization and constructive aspect is referred to, as 'assimilation' of various kinds. It has been found easiest to analyse the various reproductions in terms of these three processes. An index of levelling can then be prepared for each story and picture and statistical treatment of the results makes it possible to see whether there is any significant difference between the amount of levelling in one story or picture and next.

The Result of the Experiment

Levelling.—In successive versions fewer words are used and fewer details are mentioned. Levelling is most apparent at the start of a series of reproduction.

1. Picture of Accident

The index of levelling shows that by the third reproduction 68% of the details have been levelled out. By the last reproduction only 20% of details remain.

The Final Version of Sixth Year Group

দুটো রাস্তা যেখানে meet করেছে, তার বাঁদিকে একটা ট্রাম, তার নম্বর ৪৯৮, তার পিছনে একটি Insurance এর গাড়ী নং P.W. তার পাশে একজন ধুতি পরা ভদ্রলোক পড়ে আছেন। বোধ হয় ট্রাম আর গাড়ীতে ধাক্কা লেগেছে।

FINAL VERSION OF FOURTH YEAR GROUP

ট্রামের সাথে বাসের সংঘর্ষ হয়েছে। একটি লোক এতে আহত হয়েছে। অনেক লোক এবং একজন পুলিশ তাকে শুশ্রূষা করছে। একটি ছেলে ছুটে আসছে!

2. ELECTION PICTURE

56·2% details have been levelled out by the third reproduction, 25% original details remained by the last reproduction.

FINAL VERSION

ছবিতে একটি লরিতে নির্বাচনের কর্মিবৃন্দকে দেখা যাচ্ছে। লরির নং ডব্লিউ বি ২২৯, কেউ বলছে অম্বিকা চক্রবর্ত্তীকে ভোট দিন, কেউ বলছে, কাস্তে-শিষমার্কা বাক্সে ভোট দিন। রাস্তার লোকেরা লরির দিকে ছুটে যাচ্ছে কাগজ গুলি নেবার জন্য। রাস্তার সামনে একটি লাইটপোষ্টে কাস্তে-শিষমার্কা বাক্সে ভোট দিন এক কথা লেখা আছে। লাইট-পোষ্টের নিচে একজন ভারতীয় ও একজন ইউরোপিয়ান দাঁড়িয়ে আছেন। ভারতীয়টির মাথায় গান্ধীটুপি ও ইউরোপিয়ানটির মাথায় সাহেবীটুপি।

3. PICTURE OF HOME

About 39% details have been levelled out by the third reproduction. By the final reproduction 44·4% details remained.

FINAL VERSION

ঘরের খাটের উপর একজন ভদ্রলোক ও একজন ভদ্রমহিলা বসে আছেন। ভদ্রলোকের গায়ে কাপড়ের খুট জড়ানো, ভদ্রমহিলা শাড়ি পরিহিতা। ঘরের মেঝেতে একটি ছোট ছেলে বল খেলছে। ঘরের মধ্য দিয়ে দরজার একাংশ দেখা যাচ্ছে। একটি ক্যালেণ্ডার টাঙ্গান আছে। ভদ্রলোক অবাক হয়েছেন দেখে মনে হচ্ছে।

4. STORY 1

Travelling Story.—By the second reproduction 66·7% details levelled out and by the last reproduction 14·5% details remain.

FINAL VERSION

জায়গাটির নাম আম্বদা, যদিও জায়গাটি হাওড়া থেকে খুব কাছে তাহলেও অনেকেই তার নাম জানে না। ভোরবেলা রওনা হলে ৯ টার সময় পৌঁছান যায়।

5. EGO INVOLVED STORY

The story was presented to the M.A. examinees of Psychology whose examination was three months ahead at the time. Far fewer

details dropped out, and the main sense of the story was kept through out. This is apparent from the final version :—

এবারের সাইকোলজির পরীক্ষা ১৭ই নভেম্বর হবে। তাই নিয়ে খুব আলোচনা হচ্ছে। বেশীর ভাগ আলোচনা প্র্যাক্‌টিকেল পরীক্ষাকে কেন্দ্র করেই। শোনা যাচ্ছে প্রশ্ন খুব কঠিন হবে। তাছাড়া বাইরে থেকে পরীক্ষক আসবেন। তিনি নিশ্চয়ই আমাদের ডিপার্টমেণ্টের এ্যাপারেটাস্ সম্বন্ধে প্রশ্ন করবেন। সেজন্যই বিশেষ করে ভয়ের সঞ্চার হয়েছে।

6. Ghost Story

By the third repoduction 60% details have been levelled out and by the last reproduction 25% details remained.

Final Version

রাস্তায় একজন চাষীর সঙ্গে দেখা হলো। মুখুজ্যে মশাই তার কাছ থেকে পাটকাঠি চেয়ে নিয়ে জ্বালাতে জ্বালাতে যেতে লাগলেন। কিন্তু পাটকাঠি বার বার নিভে যাওয়ায় বিরক্ত হয়ে সব ফেলে অন্ধকারেই চল্‌লেন। শ্মশান দিয়ে যেতে মনে হোল কে যেন আসছে। তিনি কোনমতে সাহসে ভর দিয়ে চল্‌লেন।

The results of the above three stories show that the remaining details of the Ego-involved story is greater than the remaining details of the other two stories.

The details remained in case of Ego-involved story was 30·1% whereas the percentage of details of travelling story and Ghost story were 14·5 and 25 respectively.

It would thus appear that an Ego-involved story stands a better chance of being more completely recalled than a "neutral-one."

Sharpening

When the successive versions of stories and pictures are collected it has been noticed that every version has reported a limited number of details, selecting from a larger content.

First Version of Travelling Story

গ্রামের নাম আয়দা, গুপ্তিপাড়ার খুব কাছাকাছি। গুপ্তিপাড়া বেশ বিখ্যাত জায়গা। কলিকাতা থেকে একটু দূরেই। কিন্তু এমনই দুর্ভাগ্য আমার যে এ জায়গাটি একেবারে অখ্যাত হয়ে গেছে। এখানে তো কত বড় বড় লোক জন্মগ্রহণ করেছেন। বানেশ্বর পণ্ডিতের জন্ম এখানে। এছাড়া এখানে বৃন্দাবন চন্দ্রের একটি মন্দির আছে। সব কিছুর দিক দিয়েই জায়গাটা বড় সুন্দর। জায়গাটা কলিকাতার এত কাছে কিন্তু কেউই হয়ত জানে না। আমাদের যিনি সঙ্গে করে নিয়ে যাচ্ছিলেন তাঁর সমারোহের আগ্রহটা বড় বেশী। তিনি অত্যন্ত বাড়াবাড়ি করে ব্যবস্থা করতে ব্যস্ত। গুপ্তিপাড়া যাওয়া কিছুই কষ্ট নয়। সকাল ৭টায় হাওড়া কাটোয়া লাইনের গাড়ীতে চড়ে বসলে ৯টাতে পৌছান যায়। আমি তো

হাঁটুর উপর কাপড় তুলে চল্লে এক ঘণ্টার ভেতরি বোধ হয় পৌছে যেতে পারি। এ ছাড়া রেল লাইনের পাশ দিয়ে যে রাস্তা থাকে সে ধরে গেলে তো আরো তাড়াতাড়ি পৌছাতে পারি।

SECOND VERSION

গ্রামের নাম আয়দা কলিকাতা থেকে বেশী দূরে নয়। আমাদের যিনি সঙ্গী ছিলেন তাঁর সমারোহ খুব বেশী। সকাল ৭টার সময় হাওড়া থেকে কাটোয়া লাইনে চাপলে ৯টার মধ্যে পৌছানো যায়। কলিকাতার এত কাছে অথচ অনেকে হয়ত এই নামটা জানে না।

THIRD VERSION

গ্রামের নাম আয়দা। কলিকাতা থেকে বেশী দূরে নয়। হাওড়া ষ্টেশন থেকে সকাল ৭টার ট্রেনে চাপলে ৯টার মধ্যেই পৌছান যায়। কলিকাতার এত কাছে অথচ অনেকেই এর নাম জানে না।

FOURTH VERSION

গ্রামের নাম আয়দা। কলিকাতা থেকে বেশী দূরে নয়। হাওড়া ষ্টেশন থেকে সকাল সাতটার ট্রেনে চাপলে নয়টার মধ্যে পৌছান যায়। এত কাছে অথচ অনেকেই জানে না।

FIFTH VERSION

জায়গাটির নাম আয়দা। কলিকাতা থেকে বেশী দূরে নয়। কিন্তু তবু অনেকেই জায়গাটির নাম জানে না। সকাল ৭টায় উঠলে ৯টার মধ্যে ওখানে পৌছান যায়।

SIXTH VERSION

জায়গাটির নাম আয়দা। যদিও জায়গাটি হাওড়া থেকে খুব কাছে তাহলেও অনেকেই তার নাম জানে না। রওনা হলে সকাল ৯টার মধ্যে পৌছান যায়।

In the Ghost story every version has sharpened পাটকাঠি চেয়ে নিয়ে তাই জ্বালাতে জ্বালাতে চল্লেন।

In the 'Accident Picture' the Sixth year students have sharpened দুটো বড় রাস্তা এক জায়গায় মিলেছে।

Whereas the fourth year students have sharpened ছবির মধ্যে একটা ট্রাম ও একটা মোটরকারের সংঘর্ষ হয়েছে দেখা যাচ্ছে।

In the election picture every version has sharpened বিপ্লবী নেতা অম্বিকা চক্রবর্ত্তীকে ভোট দিন। গান্ধীটুপী পরা ভদ্রলোক, গাড়ীর নং ডবলিউ বি এল ২৯, ল্যাম্প পোষ্ট কাস্তে শিষ মার্কা বাক্স। etc.

Any form of movement such as একটি ছেলে দৌড়ে আসছে কেউ বলছে অম্বিকা চক্রবর্ত্তীকে ভোট দিন, ছেলে খেলা করছে has been accentuated, certain

phrase which set the scene for the story have been sharpened, *e g*. গ্রামের নাম আয়দা, একটি লরীতে নির্বাচনের কর্মিবৃন্দকে দেখা যাচ্ছে।

A final form of sharpening is seen in the way in which explanations are added to a story, in an effort to apply closure' and thus make the whole story more complete, *e.g.*, in the Accident picture, the man sitting with a paper in his hand by the lying man has been sharpened as স্বেচ্ছাসেবকেরা আহত ব্যক্তির পকেট থেকে কাগজ বের করে পরিচয় জানবার চেষ্টা করছে।

ASSIMILATION

It has been noticed that once certain items have been sharpened and provide a setting for the rest of the story, the remaining versions tend to fit the main theme of the story, so as to make it more coherent.

Very often instead of two items being remembered they are fused into one. In the Election picture the items গাড়ীটির ডান দিকে লাইট পোষ্ট ও বাঁ দিকে একজন সাহেবী পোষাক পরা লোক ও একজন গান্ধীটুপী পরা বাঙ্গালী পোষাকে লোক দাঁড়িয়ে কথা বলছে are fused into লাইট পোষ্টের নিচে একজন ভারতীয় ও একজন ইউরোপীয়ান দাঁড়িয়ে আছেন।

Many items are reported as they should be rather than as they are or as they might be expected to be. In the Accident picture, the two men by the side of a lying man leads to the description that একজন আহত লোককে শ্রশ্রূষা করছেন দুজন লোক। তাদের একজনের পেছনে একটি ষ্ট্রেচার ভাঁজ করা রয়েছে। স্বেচ্ছাসেবকটি আহত লোকটির পকেট থেকে কাগজ বার করে তার পরিচয় জানবার চেষ্টা করছে।

Another group describe the same picture as মোটর ড্রাইভার অজ্ঞান হয়ে পড়ে আছে গাড়ীর মধ্যেই। দুর্ঘটনায় আকৃষ্ট হয়ে কয়েকজন পথচারী জড় হয়েছে।

Though the inner part of the motor car is not visible in the picture and there is no crowd by the side of the injured person, it is not easy to find deeper emotional tendencies such as underlie rumour in a laboratory experiment, but in some cases it has been noticed. In the Election picture, the sentence বিপ্লবী নেতা অম্বিকা চক্রবর্ত্তীকে ভোট দিন has been reported with a change বিপ্লবী নেতা অম্বিকা চক্রবর্ত্তীকে ভোট দিয়া জয়যুক্ত করুন।

Perhaps the subject is interested in the Leftist party and unconsciously wishes the success of her party.

In the Accident picture the two men who were seated by the lying man have no dress of the Volunteers. But one of the subjects reports that স্বেচ্ছাসেবকেরা শুশ্রূষা করছেন।

As there is a paper in the hand of the seated man, the report is that আহত ব্যক্তির পকেট থেকে কাগজ নিয়ে তার পরিচয় জানবার চেষ্টা করছে। Also তাদের পাশেই ষ্ট্রেচার রয়েছে।

Though nothing is seen in the actual picture which can be guessed as a stretcher.

Ordinarily, in our daily life when street accident occurs, the general information, address and identification, etc., are known from the person's papers in the pocket. Stretchers are used to remove the injured person to the hospital or some safe place. The image of this kind of experience has been reflected on the report of the picture.

Another subject of other group reports that ট্রাম ও বাস দুটোকেই পুলিশ আটকে রেখেছে। But no such indication is present in the picture.

CONCLUSION

The process of assimilation is psychologically more important than the process of levelling and sharpening. If we compare a rumour with projection test, such as the Rorschach or the Thematic Apperception, various similarities become apparent. In a projection test the subject is faced with an ambiguous stimulus. So the interpretation of this stimulus is made differently by different people. So too when a person hears a rumour story and it is ambiguous to him and it is difficult for him to remember every detail he reports it in his own way and unconsciously selects some details and neglects others. This unconscious selection reveals the structure of his personality.

A laboratory rumour is not the same as a real rumour because the whole situation is artificial. But with the help of such a simple experiment we can get some idea how rumour developes in a particular form in our social life and why a person reports what he observes or hears in a distorted form.

FEELINGS AND EMOTIONS IN INDIAN PSYCHOLOGY

AMALENDU BAGCHI (*Jalpaiguri*)

THREE KINDS OF FEELING

In Indian aesthetics feelings are arranged under three heads —permanent, passing, and mind-born. Of the three kinds, the third one being called mind-born, the question arises, in what sense are the other two not so ? In the ordinary sense all feelings are mental. भावाश्चित्तवृत्ति-विशेषाः—feelings are certain mental transformations.

The answer to the question goes deep into the fundamental standpoint of Indian psychology. Mind of Indian psychology is distinguished from the mechanical nervous energy of modern physiology. The *antaḥkaraṇa* or the mental energy of Indian psychology is self-stimulated ; it works on its own initiative independent of the external object which it works upon. According to modern physiology, the sensory-motor impulses underlying mental activities are generated from outside by external stimuli ; according to Indian psychology, impulses for mental activities are born of the mental energy itself which then thrust out upon the external object. Perception, according to modern physiology, is the heat-wave, light-wave, etc., entering the nervous organism through the channels of sense-organs and activising the neurones of particular sensory centres of the cortex. Perception, according to Indian psychology, is just the reverse way; the *antaḥkaraṇa*—the mental energy of animal itself extends through the channels of the sense-organs and focuses on the external object perceived. With the former the initiative for mental activity comes from the external object, with the latter it springs from the mental energy itself. This self-initiative of the mental energy is not studied in modern physiology. The characteristic standpoint of Indian psychology is just to base all its studies upon this fact. And this self-stimulativeness of the mental energy again is just the fact of feeling in Indian psychology. Pleasure is just another name of self-stimulation.

As matters would have it, self-stimulation degenerates into the dynamism of self-expansion. Pleasure falls in conflict with reality and issues the process of adjustment. Harmony of self-stimulation is disturbed by forces coming from the surrounding external world.

The self-stimulated mental energy regains its harmony by neutralising the disturbing external force—which can be done by breaking the barrier of externality of the object and incorporating it within the being of the self. The pure mental self thus gets expanded by the assimilation of the external object. These secondary additions and extensions are called *Saṃskāra*—modifications in Indian sciences. With reference to *antaḥkaraṇa*—the mental energy, these are called in Sāmkhya *vāsanā*—permeation, meaning particular disposition of the whole-mind-active, synonymous, according to Bharata, with *bhāva* under which term all the different feelings and emotions are denoted in Indian aesthetics. Indian aestheticians take *bhāva* as the general term for feeling or mental disposition and limit *vāsanā* only to thos- mental dispositions which permanently stick to the animal as pere manent modifications of *antaḥkaraṇa*—the mental energy. *Bhāvas* or feelings are then classified into *Sthāyin*—permanent, meaning those mental dispositions which are permanently rooted in *vāsanā*, and *Vyabhicārin*—passing, meaning those that temporarily occupy the mind and do not form the permanent *vāsanā* of the mental energy.

Expansion occurring of the mental self, under the impact of the reality-principle demanding adjustment, is twofold. Primarily, it leads to the building of the *bhautika*—chemical *śarīra*—body of the animal assimilating the external world as food. Reality demands adjustment but reality does not allow it much in the way in which pleasure would like to have it. The food-way of assimilating the external object soon gives way. The mental self takes to other methods of breaking the barrier of externality of the external world. But these other methods are just other than what could bring about the complete unification of the self and the external object which yet remains external. The result is, the mental disposition under them is held back as unsatisfied wish. It persists in organic memory as an active impulse ever ready of itself to engage the whole mind. Such an unsatisfied wish of the mind deposited in organic memory as an ever active impulse is called *vāsanā* in Indian aesthetics. There are then the other kinds of mental disposition, especially those given by changes in the chemical composition of the body connected with food-assimilation, which have the chances of complete satisfaction and neutralisation, as such which would then remain in organic memory as inactive passive modifications of the mind. Only under external stimulations these would again rise up in activity. They are, as active principles, only temporary extensions of the mental

self. Temporarily do they engage the mind, get completely satisfied, and pass out leaving behind only a dead trace in the mechanism of organic memory. *Bhāvas* or feelings based on them are rightly called passing phases of the mind just as those based on *vāsanā* are aptly called the permanent mental principles.

Passing feelings pass out on assimilation of the external object relevant to them, but such complete assimilation always lacking in the case of permanent feelings, the latter keep on. Pleasure is not completely relieved of the pressure of reality. Yet sometimes sudden and unexpected adjustments set free pleasure momentarily from the bondage of reality. The pure mind shows itself. For the moment pure pleasure of the pure *antaḥkaraṇa*—the mental energy, diffuses over and engulfs the whole body creating certain characteristic changes in the chemical composition of the body. The chemical changes of the body under such conditions would give their corresponding *bhāvas* or feelings. Being based on chemical changes in the body thesefeelings would be certain passing feelings. But these chemical changes being wrought by the mental energy in its pure form, by the pure pleasure freed from reality, feelings based on them are rightly called *Sāttvika*—mind-born, as distinguished from the permanent or other passing feelings wherein the mental energy is not pure but mixed up with the external world, pleasure is not free but in conflict with reality.

SUKHA—DUHKHA (*Pleasure and Pain*)

According to Indian psychology, mind, being the energy enlivening the whole being of the animal, yet transcends the mere nervous energy of modern physiology ; and being so it has the first and foremost characteristic adduced to it in that it is a principle of self-stimulation. *Sukha* or pleasure is just another name of self-stimulation.

Self-stimulation in harmony is *sukha* or pleasure, its disturbance is *duḥkha* or pain. The disturbance is by the reality-principle which pleasure falls in conflict with. The harmony of self-stimulation is disturbed by the mechanical demands of the surrounding world. The mental energy enlivening the animal finds its enlivening activity interrupted and obstructed by the various entities of the external world entering the being of the animal through the channels of the various organs. While the free uninterrupted activity of the mental energy is pleasure, the flow of mental activity interrupted and

frustrated is pain. Comments Abhinavagupta, स्वसंविच्चर्वण रूपस्यैकघनस्य प्रकाशस्यानन्द-सारत्वात्—"Since the one and full flow of mental activity consisting in realising its own flow alone is the essence of pleasure" (*Abhinavabhārati*—VI), and अविश्रान्ति-रूपतैव दुःखम्—"frustration of flow it is which is pain" (*Ibid*). Abhinavagupta refers to the authority, तत एव कापिलै र्दुःखस्य चांचल्यैमेव प्राणत्वेवोक्तम्—"hence it is that the followers of Kapila hold unstability as the soul of pain" (*Ibid*).

Since the mental energy is self-stimulated it tends to regain and retain the harmony of its flow, tends to recover from pain and cling to pleasure. Self-stimulation means *inter alia* that when there is disturbance in its harmony it will not accept the position as accomplished but try to fight it out and regain the lost harmony. Abhinavagupta quotes the dictum of the pleasure-principle, दुःख-संश्लेष-विद्वेषी सुखास्वादन सादरः—"abhors the touch of pain and is eager to experience pleasure" (*Ibid*). Pleasure and pain are thus no mere sensations, mechanical in nature. Had they been so, they would have possessed equal value for the animal. But as a matter of fact, the animal does not only feel pleasure and pain but at the same time it seeks pleasurable experiences and shuns painful ones. In other words, pleasure and pain are no two distinct sensations, but embody a single mental principle of self-stimulation or pleasure.

The same is the reason again why the affective consciousness is said to possess a third aspect, to be called *viṣāda* or dullness, in Indian psychology. Self-stimulation degraded into self-expansion means *inter alia* that when the adjustment of self with the external object, incorporation into the former of the latter, is complete, mental energy leaves it as an act of passive habit. The passivity of the mental energy gives the feeling of dullness which may be equated with—what is said to be neutrally toned mental activity.

PERMANENT FEELINGS—METHOD OF STUDY

Permanent feelings are studied, firstly, as the resultants of the conflict between the pleasure-principle and the reality-principle of the mind. With the fundamental pleasure-principle the mental energy proceeds to recover from pain and retain pleasure, tends to regain and retain the harmony of its flow which gets disturbed by the external world met at the sensory-motor end-organs. How does it do so? The ways are the ways of the permanent feelings. The conflict between pleasure and reality results in the basic trends of the permanent feelings of the mind. Abhinavagupta has got a most

illuminating passage in this respect—जात एव हि जन्तुरियतीभिः संविद्भिः परीतो भवति। तथा हि दुःख-संश्लेष-विद्वेषी सुखास्वादन-सादर इति न्यायेन सर्वो रिरंसया व्याप्तः, स्वात्मन्युत्कर्ष-मानितया परमुपहसन्, अभीष्ट-वियोग-संतप्तः, तद्धेतु-कोप-परवशः, अशक्तौ च ततो भीरुः, किंचिदुज्जिगीषुरपि, अनुचितवस्तु-विषय-वैमुख्यतयाक्रान्तः किंचिदनभीष्टतया-भिमन्यमानः, तत्तत् स्व-पर-कर्तव्य-दर्शन-समुदित-विस्मयः, किंचिच्च जिहासुरेव जायते—"From the very birth an animal is permeated by these mental forms. Thus an animal is even born to be (*a*) permeated, in pursuance of the pleasure-principle, by the desire of deriving pleasure (from external objects); (*b*) laughing at others with a sense of superiority in himself; (*c*) afflicted on account of separation from the desired object; (*d*) taken with wrath against the cause of that separation of his; (*e*) taken with fear from the same when incapable; (*f*) to some extent desirous of conquering as well; (*g*) to some extent considering undesirable being taken with repugnance in the matter of an improper object; (*h*) with wonder arising at the sight of this and that achievement of himself and of others; and (*i*) to some extent desirous of leaving" (*Ibid*). Evidently, (*a*) refers to *rati* or eros, (*b*) to *hāsa* or laughter, (*c*) to *bhaya* or fear, (*f*) to *utsāha* or inspiration, (*g*) to *jugupsā* or repugnance, (*h*) to *vismaya* or wonder, of Bharata's enumeration of the eight permanent feelings, and (*i*) to *nirveda* or dispassionateness.

The above description by Abhinavagupta of the rationale of the permanent feelings may be compared with the Freudian conception of feelings. Admitting an extra-physiological nature of the mental energy Freud recognised pleasure and reality as the two basic mental principles. Abhinavagupta too, with the general assumption of the self-stimulated animal-energy, recognised that the mental energy at the *antaḥkaraṇa* with the pleasure-principle should flow to the outer end-organs to adjust itself with the realities of the external world. With their conception of self-stimulation of the mental energy, Indian philosophers, however, could further establish that it is inherent within self-stimulation or pleasure-principle itself that the mental energy should realise itself in an extension over the external world, in other words, should adopt the second reality-principle. Freud calls the mental energy based on the pleasure-principle "libido"—Abhinavagupta calls it *rati* or eros, and as analysed by him, every animal, out of the fundamental principle, is, from the moment of its birth, engrossed by *rati*. Libido is characterised by sex: *rati* too, it will be seen, is so. With this conception of self-expansion Indian philosophers, however, can further establish a meaning of sex in the context of pleasure-cum-reality-

principle ; by sex is meant the attempt on the part of the animal to absorb, to graft the external object within its own being ; sadism and masochism would be the ambivalent expressions of the one fundamental desire of having one unified being by destroying the externality either of the love-object or of self. Freud's libido is not always the affair of coitus between male and female: Abhinavagupta's *rati* too is simply the desire of deriving pleasure from some external object. Any affection and attachment is libidinous: so also is *rati*. Parallel to taboo in love Indian aestheticians too formulate *bhāvābhāsa*—pseudo-feeling based on *anaucitya*—impropriety of the love-object. According to Freud, various feelings are the products of libido under various types of conflict with external realities. The same view is evident in the above analysis by Abhinavagupta of the permanent feelings. Libido emanates from the unconscious which, unlike the mere passive organic memory of physiology, is an active principle of the mind : so also is *rati* emanating from *vāsanā*—latent wish.

The extra-physiological mind, with the two principles of pleasure and reality, is at first a potential store of the permanent feelings. The mental energy, out of self-stimulation, keeps on flowing. The mental flow at once means that some of the permanent feeling-trends are roused from their potential state—the unexpressed latent state *vāsanā* or wish—into kinetic activities of the feeling expressed. Feelings are thus studied in Indian psychology, secondly, from the point of view of dynamism and expression—on which is based the famous *Rasa*-theory of Indian aesthetics. The potential state of the permanent feelings is recognised as *vāsanā* or latent wish attached to the *antaḥkaraṇa*, the inner organ of the animal. The dynamism of the feelings is recognised as their flow from the *antaḥkaraṇa* to the surrounding world through the outer organs of the animal. Feelings are said to have conscious expression in so far as they are working at the outer knowledge-organs and action-organs. Mental energy working at the knowledge-organ gives cognition, and at the action-organ it gives volition. The conscious expression of feeling thus happens in terms of cognition and volition. The study of cognition and volition, however, becomes relevant in the context of feeling for more important reasons. Cognition and volition do not only express in consciousness the feeling otherwise remaining as unconscious *vāsanā*, but moreover determine which particular feeling is going to be expressed. Cognition and volition are the connecting link between the mental energy emanating from the *antaḥkaraṇa* and

the external world to be adjusted with. We have learnt from Abhinavagupta the different schemes of environmental exigencies met at the knowledge-organs and action-organs call for the activities of the different kinds of the permanent feelings. Thus while the *antaḥkaraṇa* is always ready with the unconscious *vāsanā* or latent wish of all the feelings, the particular composition of the environment, cognised at the knowledge-organs, and the particular set of muscular activities demanded by it for adaptation, determine which feeling would rise from *vāsanā* and be expressed in consciousness. Hence, a study of the different sets of cognitions and volitions respective to the different feelings becomes relevant for the study of those different feelings. With reference to its relation with feeling a cognition is called by Bharata *vibhāva*, meaning sensory stimuli of the feeling, and a volition is called *anubhāva*, meaning reaction of the feeling. Bharata considers *vibhāva* or stimuli of feeling as of two varieties, *uddipana*—excitant object, meaning suggestive objects and events connected with the feeling concerned, and *ālamvana* meaning the love-object of the feeling. *Anubhāva* or reaction and *uddipana-vibhāva* or excitant objects of the permanent feeling, as enumerated by Indian aestheticians, would be interesting for psycho-analytical studies. In the former much of 'sexual conduct,' and in the latter much of 'phantasies' will be found.

Rati—Eros

Rati or eros is the first permanent feeling directly derived from the pleasure-principle. Recalling from Abhinavagupta's analysis of permanent feelings, mind with the pleasure-principle, out of that principle of pleasure or self-stimulation, tends to expand and extend its being over the external world. *Rati* or eros is, first of all, this self-stimulated mental tendency of extending over the external world. Mind with the pleasure-principle is, at first, in harmony with itself, deriving pleasure from itself. Mind then proceeds to derive the pleasure from the external world. This mental tendency of deriving pleasure from, enjoyment of, external objects is *rati* or eros. The word *rati* thus primarily means 'pleasure', 'enjoyment' in Indian philosophy.

The process of self-extension of mind with the pleasure-principle would consist in attaching the external object, making it one with, the being of the self, *rati* thus means, 'attachment' in Indian philosophy.

The pleasure-principle, within the animal-scheme belongs to the *antaḥkaraṇa* doing its business with external object through sensory motor end-organs. *Rati* practically means the desire to possess the external object within perceptual and muscular control of all sorts. The feeling of *rati* divides itself into the various desires of looking at listening to, smelling, touching, testing, and handling the loveobject.

Adapting itself for doing business with external object the eleventh organ, we have learnt, has evolved the sensory motor end-organ system ; and the same has meant the evolution of the *śarīra*—the body : so that now within the animal-scheme self-extension of the pleasure-principle means attaching the external object to, making it one with, the physical body of the organism. And let it be said that the sexual approach to the external object has no other meaning. Self-extension of the pleasure-principle thus culminates in the evolution of sex. *Rati* or eros, primarily working in terms of the various sensory motor end-organs, finally selects and concentrates itself into *upastha karma*—genital activity. Thus *rati* finally means *kāma*—sexual activity in Indian philosophy. (Mere sexual union, however, does not bring about the ideal result. *Rati* or sexual union is thus supplemented in the further evolution of procreation in which occurs the highest self-extension, the perfect attachment or union between self and the external object, completes unification of the two).

Thus according to Indian psychology, *rati* or eros has the widest meaning of any and every pleasurable attachment to external object. It is not necessarily limited to the directly sexual attachment between male-female lover and the beloved. *Rati* is love as commonly used and understood. Any affectionate or devotional bond is *rati*. Father or mother loving the son or the daughter and *vice versa*, brother's love for the sister and *vice versa*, devotion to preceptor, god, master, etc. as well as the child fondling the pup or the kitten or playing with the toy, etc.—are all instances of *rati* or eros of Indian psychology, over and above the instance between the male-female lover and the beloved. *Rati* or eros is the feeling of attachment of all forms. Hence, it is that Indian aestheticians take note of *rati* as देवादि-विषया—pertaining to '*deva*'—god, etc. over and above कान्ता-वषुया—pertaining to *kanta*—beloved woman. The former term includes all the wider instances of attachment. आदिशब्दान्मुनिगुरु-नृप-पुत्रादि-विषया—(Mammaṭa in *Kāvyaprakāśa*, IV)—"by virtue of the word *adi*—etc. (*Rati* is further to be understood as) pertaining to spiritual man, preceptor, king, son, etc." (The

further use of *adi* indicates that the list is yet inexhaustive and to include whatever other possible instances of attachment might remain.)

Secondly, according to the standpoint of Indian psychology, *rati* or eros shows a primary conduct in the tendency to possess the love-object under perceptual and muscular control of all sorts. Thus the basic conduct of the father or mother loving the son or the daughter would be, according to Indian psychology, the same as that of the lover fondling the beloved, as also that of the child playing with the pup or the toy—everywhere in every instance consisting of the same tendency to possess more of the object for seeing, hearing, touching, smelling, tasting, and handling. Indeed, this uniform primary conduct of *rati* or attachment is the common tie which binds together all its divergent instances. A comparison of the *anubhāvas* or muscular reaction of *rati* with the different kinds of love-object will make the point clear. For example, even with Viswanātha who recognises love for the son as a distinct kind of feeling, different from *rati*,—*āliñgana*—embrace, *añgasaṁsparśa*—touching the limbs, *cumvana*—kiss, *īkṣaṇa*—looking at, etc. are cited as *anubhāvas* of love for the son (cf. *Sāhitya-darpaṇa* III. 252) : while the same again are recognised as characteristic of *rati* or love for the beloved woman under the condition of *sambhoga*—enjoyment (*Ibid.*, 210).

Thirdly, according to the standpoint of Indian psychology, the primary conduct of *rati* or love tends to finalise into its ideal conduct *kāma* or sexual union. The full-fledged *rati* or attachment is sexual. Indian aestheticians, however, did not fail to recognise that in all its instances except the one between the lover and the beloved *rati* or attchment kept itself fixed at its primary conduct alone without the tendency to put up its ideal sexual conduct. It is this recognition which underlies the grouping of *rati* into *devādiviṣayā* and *kāntāviṣayā* referred to above. The former group is meant to include all possible *niṣkāma* or non-sexual instances with the primary conduct alone of *rati*, the latter the *sakāma* or sexual one between the lover and the beloved with the primary conduct developing into the final sexual conduct of *rati*. In Indian aesthetics *rati* is recognised as of two distinct groups, *niṣkāma* or non-sexual and *sakāma* or sexual. Probing into the different instances of attachment, Māṇikyacandra, the reputed commentator of *Kāvyaprakāsa* summarises in his *Saṁketa* (commentary) on *Kāvyaprakāśa*)—*sneha, bhakti, vātsalya, maitrī,* and *ābandha* are so many varieties of one and the same *rati*. When it is the mutual attachment between two equals it is *sneha*, synonym for *prema*—love. So between equals the mutual attachment, being

non-sexual, is *maitrī* or friendship. Atachment of the inferior for the superior is *bhakti*—devotion. The reverse is *vātsalya*—affection. Attachment of the animate for the inanimate is *ābandha*—fondness."

Now, Bharata is quite inexplicit, if not confused, regarding the scope of *rati*. He has no explicit statement to testify whether he regards *rati* inclusive or exclusive of the *niṣkāma*—non-sexual *devādi* group. In the context of *Śṛṁgāra*—which is the name of *rati* in the fullest expression, Bharata's statements like स च स्त्रीपुंसहेतुकः—"and that is based on male and female" (*Natyasastra*—VI) पुरुषः प्रमदायुक्तः शृंगार इति संज्ञितः—"man united with woman is called *śṛṁgāra*" (*Ibid*), as well as the *uddīpana vibhāvas* aud *anubhāvas* enumerated thereof and the reference of the *sambhoga* and *Vipralambha* conditions of *sṛṁgāra* seem to suggest that Bharata recognises of *rati* only the *sakāma*—sexual *kāntā* group of *rati*. Probably, this is why in Indian aesthetics there are attempts on the part of some authors to regard *rati* specifically as the male-female *kāntā* group of affair and acknowledge the various non-sexual instances of the *devādi* group as those of feelings distinct and different from *rati*. Thus, for example, Viswanātha, author of *Sāhityadarpaṇa*, although otherwise he accepts the *devadi* group of *rati*, yet takes away *vātsalya*—affection as a permanent feeling outside *rati* and not as a variety of *rati* as Māṇikyacandra puts it (cf. *Sahityadarpaṇa* III, 251). Vaiṣṇava authors practically liquidate the non-sexual *devādi* group of *rati* by taking away further *maitrī*—friendship and *bhakti*—devotion as still other permanent feelings distinguished from *rati*, and by establishing yet another extra-*rati* permanent feeling called *mādhurya*—sweetness which is general enough to include other remaining instances of the non-sexual *devādi* group or *rati*. Their standpoint seems to be that since *rati* as that derivation of the pleasure-principle is inherently disposed towards finalising into *kāma* or sexual activity and since the *devādi* instances are quite final and full-fledged without the sexual culmination, the latter ought to be regarded as instances of feelings veritably outside and different from *rati*.

Careful critics like Mānikyacandra and reputed authors like Mammaṭa, however, disapprove this digression from Bharata, the preacher. The digression too is notable. There is no mention of the aforesaid extra feelings even in the list of passing feelings, not to speak of the list of permanent feelings of Bharata. And according to the Indian tradition of science-studies, the preacher should not be thought of as oblivious of any fact of the science he preaches.

Hence it is that careful and conscientious critics would not waver from taking Bharata's *rati* as inclusive of all forms of non-sexual attachment as well, over and above the sexual *kāntā* group.

For those critics and authors, it may be pointed out that if not in the context of *rati* as *śṛṁgāra* (*Nāṭyaśāstra*, VI), it is in the context of *rati* as भाव-सामान्य—feeling in general (*Ibid.*, VII) that Bharata preaches, तत्र रतिर्नाम आमोदात्मक भावः—"and there *rati* is the feeling of pleasure", obviously meaning, wherever there is derivation of pleasure from some external object that is an instance of *rati*, and that in the same context Bharata refers, as to the *ālamvana vibhāva* or love-object of *rati*, to the most general इष्टार्थ—the desired object (*Ibid.*, 9).

The question is, why is it that Bharata does not treat the non-sexual *devādi* instances in the context of *rati* as *śṛṁgāra*? The answer requires a previous introduction of the concept of *rasa* and *bhāva* of Indian aesthetics. वीतविघ्न-प्रतीति-संग्राह्यो भाव एव रसः "*Rasa* is a *bhāva* or feeling taken in consciousness in such a way as that all obstructions (to such realisation of the feeling) are gone." (*Abhinavabhāratī.*, VI). In other words, the full-fledged mental expression of the feeling is called the *rasa*-state of the feeling. *Sṛṁgāra* is the name of *rati* in the *rasa*-state, in the state of its full-fledged mental expression. Now, according to Indian aesthetics, a feeling may not attain the fullest mental expression on the grounds, among other things, of either limitation to that effect within the inherent nature of the feeling itself, as in the case of the passing feelings, or inadequacy of the *vibhāva*—stimuli and *anubhāva*—reaction of the feeling, even if the feeling be a permanent one as such otherwise eligible for fullest mental expression. The feeling with lesser mental expression would be called mere *bhāva*. The difference between *rasa* and *bhāva* is this: difference in the economy of the mental expression. Otherwise, preaches Bharata, न भाव-हीनोऽस्ति रसो न भावो रस-वर्जितः—"There is no *rasa* without *bhāva* as also no *bhāva* without *rasa*" (*Nāṭyaśāstra*, VI. 36). To come to the matter in hand, that Bharata does not treat the *devādi* instances or *rati* in the context of *śṛṁgāra* does not at once establish that Bharata does not recognise them as *rati* instances. It may also signify that after recognising *rati* as the feeling of attachment in general with any and every pleasurable object as its love-object, Bharata selects the sexual *kāntā* group alone as eligible for promotion into the superior orbit of *śṛṁgra*—the *rasa*-state of *rati*, while the non-sexual *devādi* instances are meant by Bharata to be left below in the lower orbit of *rati* as mere *bhāva*. Possibly, reading this significance

in Bharata's treatment of *rati*, Mammaṭa formulates, रतिर्देवादि-विषया . . . . भावः प्रोक्तः । कान्ताविषया तु शृंगारः—"*Rati* with objects like god, etc. is called *bhāva*—mere feeling, pertaining to *kāntā* or the beloved woman, however, is *śṛṅgāra*." (*Kāvyaprakāśa*, VI).

Now, the question is, on what ground is the *devādi rati* debarred from attaining the superior *rasa*-state of *śṛṅgāra*? Is it because of any limitation to that effect in the inherent nature of the *rati* of this group? Then *devādi rati* would not be a permanent feeling, since permanent feelings are permanent because of their eligibility for attaining the *rasa*-state. So preaches Bharata, विभावानुभाव-व्यभिचारि-परिवृतः स्थायिभावो रसनाम लभते—"It is the permanent feeling which, attended by stimuli, reactions and passing feelings, receives the name of *rasa*" (*Nāṭyaśāstra*, VII). But factually, there is no trace of *rati* outside the list of permanent feelings of Bharata. If *devādi rati* is at all a *bhāva* or feeling, with Bharata, it can be traced only as a permanent one, cognate with the *kāntā* instance of *rati* ; and if the latter is held eligible for *rasa* on the ground of its being a permanent feeling, the former too should be so on the same ground Thus so far as Bharata's standpoint is concerned, the ineligibility of *devādi rati* for *rasa* cannot be justified on the ground of any limitation to that effect within the inherent nature of the *devādi rati* itself. According to Bharata's treatment, *devādi rati* is perfectly a permanent feeling as such otherwise perfectly eligible for *rasa*.

How else can it then be said to be eligible for *bhāva* alone of lesser mental expression? As already noted, the alternative lies in holding *vibhābas* and *anubhāvas* of the *devādi rati* as always inadequate for the full-fledged expressien of the feeling concerned. *Devādi rati* is always a case of उद्बुद्ध-मात्र-स्थायी—"permanent feeling just aroused" (*cf. Sāhityadarpaṇa*, III, 260) and विभावादिभिरपुष्टः—"not sufficiently nourished by *vibhāva*, etc." (*cf. Ibid, vṛtti* after *kārikā*). The relevant stimuli and reaction of *devādi rati*, however profuse, are never sufficient and adequate for the fullest expression of the feeling for which they are applied. Mother's love for son and the latter's adoration for the former, friend's love for the friend, devotion to superiors, child's attachment to toys—none of the instances of the wider *devādi rati*, however hard they may be excercised through respective stimuli and reactions, do never give a full-fledged expression of the fundamental one feeling which they all signify—the feeling of *rati*, attachment or eros.

And, let us now point out, that is all because they do, one and all, fail to put up the sexual behaviour, because their lot is it to show

up to the primary conduct alone of *rati*, the sexual culmination remains prohibited and unknown in them. And *rati*, as we have studied its inherent trends and characteristics in accordance with, and in pursuance of, the general standpoint of Indian philosophy, is the feeling of pleasurable attachment which through a primary conduct of achieving various perceptual and muscular control over the love object, tends to approach it with the sexual conduct in which it is that *rati* attains its full culmination. That sexual culmination being absent in the *devādi rati*, *rati* of the *devādi* group can never be said to be *rati* fully expressed. The respective *anubhāvas* of *devādi rati* are always insufficient and inadequate for the full-fledged expression of *rati*. The respective *anubhāvas* of *devādi rati* show only up to the primary conduct of *rati*. And *rati* with the primary conduct alone, without the sexual culmination, is *rati* with inadequate *anubhāva*, *rati* half expressed, उद्बुद्ध-मात्र-स्थायी—a permanent feeling half aroused, as such it is a *rati* eligible for the lower *bhāva*-function alone and not for the higher *rasa*-function as well. It is in the fitness of things that Bharata, although he means by *rati* pleasurable attachment of all sorts—sexual or nonsexual, should ignore consideration of the nonsexual instances in the context of *śṛṅgāra*. *Śṛṅgāra* is *rati* fully expressed, nonsexual *rati* is *rati* half expressed, hence the non-observation of the latter group in the context of *śṛṅgāra* is as it ought to be.

The question remains: that उद्बुद्ध-मात्र-स्थायी—permanent feeling half expressed would be the case of *bhāva*-feeling instead of *rasa*-feeling goes without saying, why is it that Mammaṭa enjoins such a fate specially for *devādi rati* out of all various instances of permanent feelings? So also Viśwanātha, while enjoining the possible cases of feelings lotted to remain as *bhāva*, specially mentions देवादि-विषया रतिः—"*rati* pertaining to God, etc.", although he makes the general mention of उद्बुद्ध-मात्र-स्थायी "permanent feeling half expressed" (cf. *Sāhityadarpaṇa*, III, 260). Why this special mention of *devādi rati* out of all sorts of possible cases of half expressed permanent feelings? It is a controversial point. It may, however, be said that aestheticians specially mentioned the case of *devādi rati* because so much controversy raged over it amongst scholars and authors to take or not to take *vātsalya*, *bhakti*, etc., as *rasa*. Moreover, *devādi rati* is a peculiar instance of उद्बुद्ध-मात्र-स्थायी—permanent feeling half-expressed, since, while all other instances of the same otherwise possess the practical possibility of attaining the fully-expressed *rasa* state with adequate stimuli and reactions,

devādi rati, however profuse are its respective *vibhāva* and *anubhāva*, will always remain a half-expressed *rati*, the adequate *anubhāva* for it, the sexual conduct, will ever remain prohibited in it.

Thus Bharata's inexplicit treatment of *rati* may be construed in the above light, and so construed, Bharata's standpoint, apropos the most fundamental feeling of *rati* or eros, may be summarised as follows :—

Rati means pleasurable attachment to external objects of all sorts. The conduct of *rati* consists in a nonsexual primary conduct (consisting in achieving perceptual and muscular control over the love-object) culminating in a final sexual conduct. *Rati* is of two distinct groups : *sakāma* or sexual and *niṣkāma* or nonsexual. The sexual *rati* is the instance between male-female lover and the beloved and is called *śṛṁgāra*—love ; the nonsexual *rati* consists in other instances of attachment of all sorts and is called *vātsalya*—affection, *bhakti*—devotion, *maitri*—friendship and *ābandha*—fondness. *Śṛṁgāra* is the full-fledged *rati* : *vātsalya*, etc., are *rati* half-expressed. *Vātsalya*, etc., are not at all *rati* because they show the primary conduct of *rati*. *Śṛṁgāra* is *rati* full-fledged because herein the primary conduct of *rati* proceeds further to culminate in *kāma* or sexual activity. Bharata admits *vātsalya* etc., as *rati*, but he treats *rati* as *śṛṁgāra*.

Śṛṁgāra or love is the feeling of *rati* or pleasurable attachment directed towards *kāma* or sexual enjoyment. Preaches Bharata, "Whichever is the union between male and female is known to be *kāma* or sexual affair". (*Nāṭyaśāstra*, XXIV, 91), and "Whichever in male-female union elicits the feeling of *rati* or attachment is to be known as *śṛṁgāra* or love, well spread and clean" (*Ibid*, 92). *Rati* is the feeling of attachment in general ; *kāma* or the sexual motive, this general feeling of attachment, obtains a peculiar grand splendorous, chaste and elegant, and attractive experience—that is the feeling of *śṛṁgāra*. Preaches Bharata, "Whichever in this world is clean, chaste and elegant is compared with *śṛṁgāra* : whoever is dressed gaudily is said to be possessed with *śṛṁgāra*" (*Ibid*, VI).

Kāma or the sexual motif is the determining force of the feeling of *śṛṁgāra* or love. Indian aestheticians noted the very many different shades of *śṛṁgāra* as a mental experience, corresponding to the very many different ways in which *kāma* or the sexual motif works. Thus, for example, *śṛṁgāra* has, first of all, two opposite grand tones, *sambhoga*—enjoying and *Vipralambha*—pining, in as much as *kāma* or the sexual impulse happens to work in two broad

different ways under two broad different conditions, *viz.*, the male-female parties with harmony of union preserved or broken. (cf. *Sāhityadarpaṇa*, III, 186). Preaches Bharata, "it has got two different states, *sambhoga* and *Vipralambha*" (*Nāṭyaśāstra*, VI). Indian aestheticians give the most elaborate descriptions with minutest details of everything connected with love. Thus, for example, *Vipralambha-śṛṁgāra* or the pining love is said to be of four varieties—*pūrvarāga*—courtship, *māna*—jealous anger, *pravāsa*—foreign residence, and *karuṇa*—tragic, of which again *pūrvarāga* is of three varieties, *māna* of two, and *pravāsa* of three. These are again further discriminated into their respective subdivisions (cf. *Sāhityadarpaṇa*, III). Besides dividing into *sambhoga* and *Vipralambha*, Bharata refers to ten conditions of *śṛṁgāra* or love corresponding to the ten successive stages of *kāma* or sexual motif narrated by him in the 24th chapter of *Nāṭyaśāstra*.

For all practical purposes such detailed studies of *śṛṁgāra* or love are directly derived from *kāma-śāstra* or sexology. To refer to the aforesaid ten conditions of *śṛṁgāra*, Bharata cites treatises on sex-art as his source. वैशिक-शास्तैश्च दशावस्थोऽभिहितः—"And treatises on sexual art opine it to be of ten conditions" (*Nāṭyaśāstra*, VI). Indian aestheticians, who were to deal with love as a *cittavṛtti*—mental function and experience, freely borrowed from sexology because it was their standpoint that sex was the determining force of the mental experience of love, and the different forms of the workings of sex lent different shades and tones to the mental experience of the general love. Thus, for example, *sambhoga-śṛṁgāra* or the enjoying love occurring in the fullness of union is certainly a different mental experience from *Vipralambha-śṛṁgāra* or the pining love occurring in the fullness of union yet wanting. The pining love too gives different feeling-experiences with different sex-conducts in *pūrvarāga*, *māna*, *pravāsa*, and *karuṇa*.

The feeling of love in Indian psychology is the feeling of sexual trends and impulses. Hence, so far as the study of *śṛṁgāra* or love is concerned, Indian psychology completely merges in *kāma-śāstra* or sexology of which the preacher was Vātsyāyana, his work being called *Kāmasūttra*. Utilising utmost *kāmaśāstra*, Indian aestheticians varied as vastly in their treatment of the aspects of love as those aspects were various.

Of this sexual love, which is the characteristic *śṛṁgāra* or love of Indian psychology, what would be the general nature of *vibhāva* or stimulus and *anubhāva* or muscular reaction ?

The *ālamvana-vibhāva* or the love-object of *śṛṁgāra* would evidently consist in the male-female lover and the beloved.

Uddīpana-vibhāva or the exitants would consist in things and events strongly associated with the affairs of sex.

Anubhāva or the muscular reaction would consist in such activities as would mean perceptual and muscular control of all sorts over the love-object permeated with the sexual motif.

Picking up from Bharata's enumeration (*Nāṭyaśāstra*, VI) these may be noted as follows :—

(i) *Uddīpana-vibhāva* :—

Ṛtu—seasons ; seasonal changes in nature.
Mālya—garland ; flowers and floral wears.
Anulepana—ointment ; use of cosmetics.
Alaṁkāra—ornaments ; wears of jewellery.
Iṣṭa-jana—congenial associates.
Viṣaya—sensuous objects.
Varabhavana—exquisite mansion.
Upavana—pleasure park.
Krīḍā—sports.
Līlā—graceful movements, etc.

(ii) *Anubhāva* :—Skilful display of eyes, casting of glance, furtive glance, gait, graceful movements of limbs, and sweet words, etc.

APPLICATIONS OF CLINICAL PSYCHOLOGY TO VOCATIONAL COUNSELING

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Any and all counseling or guidance sessions, for whatever their manifest content, are learning situations for persons who are troubled by problems. Theoretically, the aim of all counseling is that of tension reduction (to phrase this in terms of one contemporary learning theory) and which may be achieved in a variety of ways, certainly not all of them non-directive. Several writers have persuasively dealt with the unnecessary fragmentation when the various labels and counseling styles are considered. Essentially any counseling situation, "vocational" or "educational" or otherwise, is a *therapeutic* one wherein the client is aided towards a more adequate conceptualization of his own role and where, necessarily, the help of a professional worker is sought. This involves much more than "telling" or informing about results of psychological tests. It is fruitless to become involved in "merits" of one style of counseling or another. Any perceptive psychologist or counselor soon learns that there are occasions where the imparting of information is most essential, be this about study habits, remedial reading techniques, job requirements, university entrance requirements or other items. The important thing here is that the initiative remain with the client and that the counseling situations are so managed that dependency relationships between client and counselor are not unwittingly fostered.

It should be remembered, too, that a request for vocational counseling—or, as so often phrased by USA clients, a request for "an aptitude test"—is frequently a screen actually denoting a need for deeper help. The experience of the writer in the operation of a private, community-wide vocational counseling service in USA, is that many individuals can manage, without threat to their own self-concepts, to request such a service whereas they would entirely reject the notion of consulting a psychologist *per se*. There is little stigma associated with the idea of aptitude tests, especially if these are thought of exclusively in vocational terms; people with relatively serious interpersonal deficiencies are frequently brought in to such counseling centers, even under their

own motivation. They are requesting in detour-fashion a kind of psychological assistance that goes far beyond the occupational area. Any vocational counselor, as such, must therefore be prepared—in a clinical sense—to cope with such problems, or at least be able to recognize the main facets and, if need be, to make appropriate referrals elsewhere where possible. This then means that any vocational psychologist—quite outside his knowledge of diverse jobs and their requirements—must be a clinical psychologist in that he is prepared to cope with basic indecisions, ambivalencies, dependencies and irrealities that many clients present.

Traditionally, discussions of clinical psychology have usually been broken up into the time-perspective groupings of diagnosis, treatment and evaluation. Purely for convenience, in a short article of this type, these will be treated separately. It is, however, recognized that counseling procedures of all types represent an intimate intermingling of these three aspects. Certainly no adequate counseling outcome could be achieved without adequate attention being paid to all three. In individual cases, attention would need to be devoted, perhaps disproportionately, to only one.

Diagnosis

Bordin [2] and Pepinsky [4] in USA offer fruitful suggestions on this score. The general point of departure of both of these writers is the futility of labelling client problems in terms of a sociological description, *i.e.*, by their surface symptoms. For truly psychological assistance, we need psychological concepts; this necessarily implies an awareness of (and even some clinical skill with) deeper levels of analysis. Both these writers asked themselves the critical question of why their clients were seeking help; they found themselves giving attention to personality dynamics and to "basic" causations. These, in turn, suggested appropriate ways of treatment. The earlier analysis of these problems by Bordin is less complex than that of Pepinsky; the latter writer, however, has spelled out in greater detail the issues involved in eight diagnostic categories : lack of assurance, lack of information, lack of skill, dependence, cultural self-conflict, interpersonal self-conflict, intrapersonal self-conflict and choice anxiety. Both writers based their descriptive categories on analyses of many clients at a university counseling center. Pepinsky, elaborating and consulting with Bordin and others, was able to formulate fairly specific behaviour syndromes in connection with each of his categories and, in some instances, to suggest specific methods of treatment.

From the point of view of counseling, these two articles are of considerable diagnostic significance, quite aside from treatment suggestions. The experience of the present writer has been that to think in such terms is far more productive of adaptable counseling techniques than the compartmentalized categories usually employed. These are, of course, USA situations; a comparable study in India might produce rather different categories. But in any counseling situation, insights are essential for both the counselor as well as the client; such diagnostic groupings (or something similar) are far more productive on this score than the traditional ones of "vocational," "educational," "health," etc.

Treatment (Interviewing)

Many counselors, perforce, must operate in a very limited setting since the client is not coming for an extended series of interviews. Very often the situation is so structured that specific answers to questions must be forthcoming; environmental circumstances and, more often, client disinclination, prevent the acceptance of a series of truly therapeutic interviews. The counselor is faced with the problem of communicating essential meanings, information, interpretations, future suggestions in a limited space of time. To achieve this sort of goal, many short-cuts to needed information must be employed.

It is here that aptitude tests may play a most important role. For many clients, this needs a basic reorientation principally because dependency needs are relatively strong. The present writer frequently finds himself in the position of "discouraging" aptitude tests; too often, clients arrive with the notion that the answers to be found here. Such misconceptions have occasionally led counselors to throw the baby out with the bath. In a relatively short-term counseling situation, where the counselor may only have one or two hours for final interviews, it is important, however, that aptitude tests be perceived by the client in as non-threatening way as possible. The suggestions by Seeman [5] and by Bordin and Bixler,[3] who aided clients in selecting their own aptitude tests, might be advantageously applied here. The present writer's experience has been that this particular technique in self-selection of tests is rewarding in that not only do clients become well motivated towards a variety of aptitude tests but also that it is possible to inculcate, right at the beginning, the notion of the probable error in all such final scores. But there are, of course, counseling cases—even those which are primarily of a vocational sort—where no tests seem needed. To cite one particular group, for clients experiencing anxiety

over a choice between one or more occupational or educational alternatives of action, the main job of the counselor is to have the client face the unpleasant aspects of two or more behaviour choices.

In general, however, the writer's experience has shown the great utility of psychological tests, particularly those dealing with personality and temperament. Analyses of test patterns, but always in relation to personality dynamics, are here very significant. Individual test scores in themselves are rarely very important; how *groups* of scores relate to outside criteria are of far greater value.

It is perhaps superfluous to state that the most useful psychometric devices are those of a diagnostic sort. Little, if any, usefulness can result from " omnibus " tests. Our experience has been that we find almost no occasions where such general tests (the Otis, Standford-Binet and the like) are productive in a counseling situation. It is desirable to employ tests which are as " pure " as possible and counselors should therefore be familiar with the utility of factor analysis techniques and to base interpretations of test results within this framework. For the USA, the Strong Vocational Interest Blank is an illustration here and the writer is aware that beginnings on this score are being made in India.

Diagnostic personality devices are likewise helpful as well as self-appraisal inventories. In a counseling situation, one perhaps rarely meets with conscious " faking "; there is always the possibility, nevertheless, of the intrusion of unconscious factors. Because of this, for example, the writer would never use an " obvious " inventory such as the Bernreuter (to name only one). Better are inventories with built-in " fake " keys but these, so far as the writer is aware, have yet to be made available in India. We would employ the TAT and the Rorschach only when there are suspiciously deviant signs or where there are indications, *via* interviews of interpersonal difficulties. Since many disturbed persons will first request aptitude testing for presumably vocational ends, such projective devices are of great utility to the counselor in making suggestions for next steps since these might easily involve further personal counselng and, in some cases, outright psychotherapy. From a strictly vocational point of view, the TAT appears to be more useful especially where vocational counseling involves an assessment of a client's reaction to authority figures and his ease in interpersonal relationships.

Evaluation

Clinically, the writer feels that two main types of evaluation need to be done : an estimate made by the counselor of the appropriateness

of the occupational choice for the particular client involved; an earnest attempt, difficult at best, at follow-up studies.

The psychological consistency *for the individual* of the occupational choice is most important. This will vary depending upon the particular stage of occupational choice in which the client is now operating (whether at the fantasy level or at more realistic leavels). Significant will be the client's own work needs, the emotional factors operating behind his choice, the types of job satisfactions for which he is seeking. Frequently these may be traced back to family background factors. It is not the mere possession of good work qualifications that is of significance, but whether the client can utilize these effectively, not in aptitudes, but in feelings and ideas and attitudes.

Projective tests may be of enormous help here as well as pattern analyses using other types of personality inventories. The writer recalls the counseling sessions held with a person long engaged in food work and where promotional possibilities here were being considered by the employer. Aptitude and ability measures indicated an only average individual in most aspects; the Rorschach record indicated a person emotionally fairly well adjusted, but with fairly strong aggressive attitudes; the significant item here was the very large number of food responses to the cards. Another case comes to mind of a student seeking confirmation of her choice for the work of librarian; here the Rorschach revealed an unusually large number of *d* and *dd* responses. Other counseling cases turn up where there appears to be a large intropunitive element in the picture, such as the case of a disabled person with a respiratory condition which contra-indicated exposure to pressure changes and to dampness but who, nevertheless, had the stated goal of deep-sea diver; or the case of still another individual, incapacitated because of a knee injury which contra-indicated stooping and bending, who was strongly motivated towards training in the field of laying of floors. Aptitude tests here can contribute to the making of a more realistic occupational choice; the larger task is to inquire into and to change attitudes concerning the work needs of such persons.

Group follow-up studies are, of course, urgently needed. Diagnosis, to be meaningful and dynamic, must have a future referent; it is the prognostic aspects that must be checked. All counselors easily agree as to this need but pressure of work with new clients, or disinclination because of methodological difficulties, usually interferes. Few broad studies are available in this area. Until more are done, much of clinical counseling will of necessity remain on *an adhoc* basis.

Berdie [1] has discussed the judgmental differences where five counselors reviewed and rated the appropriateness of a student's

vocational choice after one session of aptitude testing and interviewing. The follow-up picture for the 20 cases involved was, in general, an encouraging one. In individual cases, however, there was frequent neglect of personality data and, in others, definitely unwarranted conclusions based on test data. This type of follow-up, including the feature of comparing a counselor's judgments with those of his colleagues concerning the same case, may be a very useful and illuminating learning device as well as productive of some humility on the part of the counselor.

Follow-up studies based on individualized counseling cases present special difficulties. The relatively few studies in this area, most of them only preliminary and exploratory, have been forced to use inadequate—because of the lack of any other—criteria. Williamson and Bordin [6] have carefully reviewed the criterion difficulties in this connection and have also critically evaluated some of the experimental designs that have been employed. These authors feel that, in the end, a *judgment* criterion is most feasible. Here the client's adjustment is estimated at the time he presents his original problem; a follow-up interview is later held; status at this later time is now considered in the light of the counselor's earlier diagnosis and prognosis. Five categories of individual adjustment and three for client co-operativeness were employed. Experience with this method at the University of Minnesota (Minneapolis, Minnesota, USA) has indicated the desirability of two case readers plus one arbitrator. The findings indicated a clear relationship between progress toward adjustment and the degree to which the student-clients co-operated with the counselor. Continued efforts are needed along these lines and, particularly, a beginning needs to be made in India.

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A NEW ASPECT OF INTELLIGENCE TESTING

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In the course of testing intelligence, it is often found that the subject can pass one or two items from a wide range of age-levels. Again in some cases, the spread is quite narrow. As the subject's I.Q. depends on the number of items passed, so we think that the I.Q. can give a partial description of the abilities of the subject. In a scale of intelligence, the items are generally arranged in order of graded difficulties. So when a subject fails to pass some items of the lower age levels and can pass some items of the higher age levels, it certainly reveals some new aspect of his mental ability. So we think that a measure of I.Q. supplied with a measure of the spread may give a fuller description of the intelligence of the subject.

Let us take an actual case to explain the fact.

Master A.D.M. is a boy of Class IV of a South Calcutta School. His chronological age is 8 years 8 months. I used the Terman Merrill scale of measuring intelligence—M. Form, Calcutta University Edition, to measure the intelligence of the boy.

The following table gives the result of the testing :—

Table No. I

			Years	Months
Year VIII	All Plus	Basic Year Level	8	—
Year IX	5 tests passed	Credit 2 months each	—	10
Year X	4 tests passed	Do-	—	8
Year XI	3 tests passed	Do-	—	6
Year XII	1 test passed	Do-	—	2
Year XIII	2 tests passed	Do-	—	4
		Total M.A. Score	10	

Therefore the I.Q. $= 126/104 \times 100 = 121$. We get 121 as the I.Q. of the boy. But only this figure does not reveal how the boy has achieved this score. The boy's scores spread over a length of six years. Another interesting fact is that the boy passed only one item at the 12th year level, but two items at the 13th year level. However, our main stress is on the point that measure of I.Q. is not sufficient to describe the mental ability, unless it is supplied with a measure or the spread or

the scatter of the items passed in different years. We think that the suitable scatter here, should be σ or Q.

Now the problem is how to calculate this measure.

We here want to follow the Spearman's method of calculating σ, when a case with a spread of all passed and all failed is available. This method is generally used in calculating the standard deviation of the momentary R. L. 's obtained by means of constant method in determining the Aesthesiometric Index of an individual.

Table II

(Calculation of σ by Spearman's distribution Method; data from Table I)

Steps M.A.	Items Passed	Relitive Frequencies	f	x′	fx′	fx′²	Remarks
14 Year	0	0	·33	3	·99	2·97	Items passed at each level are scored as +
13 Year	++	·33	—·16	2	—·32	—·64	
12 Year	+	·17	·33	1	·33	·33	
11 Year	+++	·50	·17	0	0	0	
10 Year	++++	·67	·16	—1	—·16	·16	
9 Year	+++++	·33	·17	—2	—·34	·68	
8 Year	++++++	1·00					

N=1·00; $\Sigma fx' = \cdot 50$; $\Sigma fx'^2 = 3\cdot 50$.
Mean=11 M.A.
$\sigma - 3\cdot 5 - (\cdot 50)^2 \times 1 = 1\cdot 80$ M.A.

An ogive can be drawn supplying a clear picture of the subject's gradual ability in passing the itmes as the age-level increases. The value of σ (1.8 M.A.) indicates that the scatter is much. This can be explained by the fact that the subject shows ability to pass particular types of test items from a wide range of tests for different age-levels.

Now different psychologists give various explanations of the scatter. According to some the scatter of passing test items indicate inadequate personality. Their observations are that maladjusted or "emotionally unstable" individuals are likely to be erratic in their performance of mental tests. This is often manifested as scatter. Scatter consists in the ability to do some test items that are usually difficult combined with failure on some tasks that are usually easy. When tested with an individual mental test, a person should, in theory, be able to pass all the tests up to the level which indicates his mental age and should fail all tests that are harder than this level. But in practice we see that this seldom occurs. Our point of discussion, however, is this that a subject's I. Q., unless it is supplied with a measure of the scatter of the test items, is to be considered inadequate as to the fuller description of his mental ability. To arrive at a satisfactory conclusion a further investigation is needed.

AN ATTEMPT TO STANDARDISE THE BENGALI ADAPTATION OF TERMAN 'M' FORM

S. P. Ghosh and Roma Sen (Calcutta)

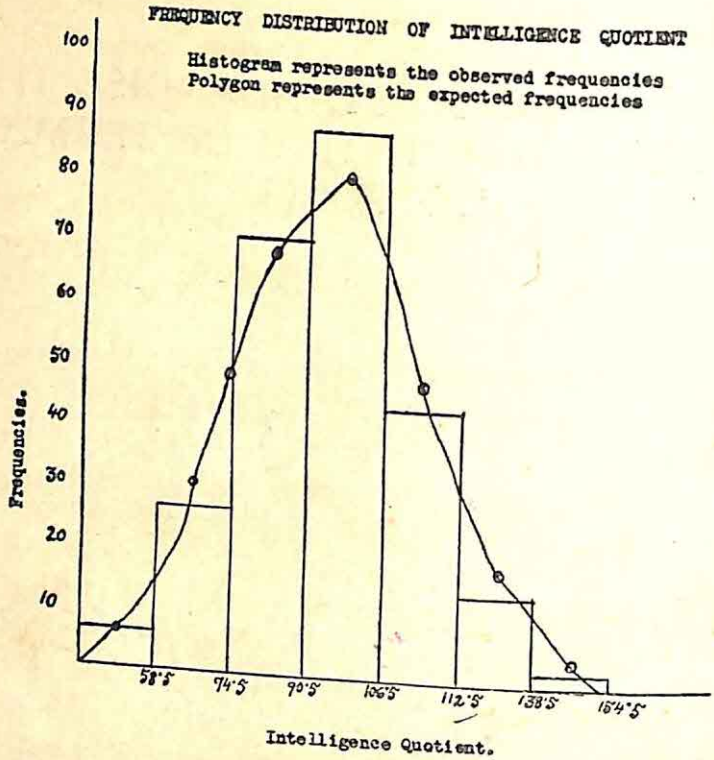
Terman test of general intelligence has long been adapted into Bengali by the Section of Applied Psychology, Calcutta University. On account of socio-economic differences, adaptation of an English version into Bengali has involved many additions and alterations. This adapted scale is now being administered upon different sections of population of our country for measuring intelligence. The specific purpose of the present investigation is to standardise the scale upon lower age group children of ages from six to twelve. The need or importance of such a work can hardly be exaggerated. The absence of a dependable test of intelligence in Bengali from lower level to adolescence is greatly felt by the educationists and social reformers of our country. The present work is based on 250 cases studied at twenty different centres. The test-scores have been expressed in terms of Intelligence Quotient and the school marks have been taken at the same time. The materials thus collected have been utilised for standardisation. The materials are however small and as such this investigation has its limitations. Subject to the above limitations, the standardisation work involves the following steps :—

Testing the representative character of the sample

The standardisation of a test involves in the first place, verification of the representative character of the materials, so that the test can be claimed as objective. One obvious objection that can be raised against the materials is that the number of persons tested is very small and as such it is not a representative sample but only a selected group. The above objection however will lose much of its force, if it can be shown that the materials have followed the patterns of normal distribution. The systematical nature of the distribution curve as given below indicates that the materials have been distributed normally, and the scale is an objective one.

The Polygon represents the frequencies obtained.

The Histogram represents the frequencies expected.



Now the goodness of fit of the distribution of materials has further been tested by " Chi-square " test in terms of the formula :

$$x^2 = \sum \left[\frac{(fo - fe)^2}{fe} \right]$$

in which fe represents frequency occurrence of expected facts on a given hypothesis, fo represents frequency occurrence of observed facts. The " Chi-square " test thus represents an useful method of evaluating actually observed results against the results to be expected on some hypothesis. Now when x^2 is not significant it means that the normal curve is a good fit. Here in the present investigation the value of x^2 is 8.5 and as such not significant, as the probability of obtaining this value is greater than .30. So from this test we find that the divergence between the obtained and the expected distributions in the present case is very small and as such the null-hypothesis that the materials are distributed normally is retained. The sample is thus not a selected one, but is representative and as such the measuring tool, the test is objective.

Finding the age-norms :—

Now, the materials obtained have been found to be representative and at this stage, it is necessary to establish definite age-norms for the interpretation of the results. The word ' norm ' may be used in two senses. It may either mean a standard of comparison to which the

various individuals of a group may conform or it may simply mean the central tendency of the scores of a specific group without any implications concerning the desirability of individuals conforming to it. The reliability of the norms in general depends upon the number of cases and upon their selection.. The larger the number of cases the more stable will be the norm. Here in the present investigation, norms have been determined according to different age-groups and all groups taken together as shown in the table below :—

Table No. 1

Age-Group	Nos of Boys Girls.	Mean	Mode	Medion	M.V.	S.D.
VI	22+14=36	115	116	112	12.8	16.8
VII	19+17=36	107	102	103	13.3	17.6
VIII	18+18=36	97	87.5	98.5	8.6	11.5
IX	17+18=35	101	105.5	100.3	14.1	18
X	15+20=35	97	89	93.2	15.5	19.8
XI	18+18=36	104	97	106.1	14.7	17.6
XII	18+18=36	93.5	104.5	97.5	15	19.4
VI—XII (Whole group)	127+123=250	102.3	106.5	102.5	14.7	18.98

Testing the validity :—

To determine the validity of a test the test scores are to be compared with an external criterion. The criteria in the case of an intelligence test are many, like chronological age, teachers' judgment, school results, etc., which are usually used by psychologists for validating a test. For our purpose, we have employed the criterion of school result or achivement. To see how our test is valid, correlation between achivement quotients and test-scores (Intelligence Quotients) has been worked out. How far the individuals tested are successful in academic career are marked according to their last annual examination results. We have however taken the total marks obtained by the testees in all the subjects examined. The percentage of the marks obtained in relation to the full marks is worked out. The validity co-efficient of the test scores with the criterion of school marks in the present investigation is .51. This correlation has been determined by the Product moment method. Now to test the reliability of this

correlation the significance of correlation has been determined by the ' t ' test in terms of the formula : —

$$t = \frac{r\sqrt{N-2}}{\sqrt{1-r^2}}$$

In the present case t = 5.715 with 2 df and as such the correlation is significant at 1% level.

Thus from the above statistical analysis we come to the conclusion that there exists a fair degree of correspondence between the Intelligence Quotients (I.Q.) and the Achievement Quotients (A.Q.) of the children tested. Or in other words, the test measures intelligence as such, intelligence as expressed in achievement.

Testing the Reliability :—

The question of reliability of the test has been considered by correlating the scores of the Form " M " with the scores of the alternate Form " L " administered upon the same group, in connection with another investigation of the author published in the Indian Journal of Psychology, March and June, 1942, and a fair correlation (.80) has been obtained. On the basis of this finding " L " form has been eliminated and now only " M " form is being administered for measuring intelligence.

Allocation of the questions to proper age-group :—

Lastly, question-items have been analysed and their allocation to proper age-groups has been attempted. To do this, the questions have been arranged according to their increasing order of difficulty in terms of percentage of correct answers. 65-75% of the correct responses in a particular age-group has been accepted as the standard of allocation to that age-group; and when this condition has not been fulfilled the question has been either shifted or modified. The summary of the analysis as given in the table below shows that the following question items require modification.

The questions are now being revised and modified according to the findings of the analysis. They are again to be applied upon a large number of persons before final standardisation. An intelligence test, specially when it is of verbal type, cannot be said to be standardised once for all but it is always modifiable on the basis of observed facts. No such thing as ' thus far and no further ' can be asserted in case of a standardised test. It is not something fixed but rather flexible. The scale thus standardised through it is a provisional one, but it can be utilised as an useful tool for the measurement of intelligence.

Table No. 2

Age-group	Nos. of Qs	% of correct answers at different ages.	Remark
V	Q.1	16% at 10 yr	harder for higher age.
VI	Q.4	34% at 6 yr	harder for the age.
VII	Q.6	100% at 7 yr	easier for the age.
,,	Q.2	0% at 11 yr & 12 yr	harder for higher age.
,,	Q.5	27% at 12 yr	harder for higher age.
VIII	Q.1	30% at 8 yr	harder for the age.
IX	Q.4	20% at 9 yr 30% at 10 yr 24% at 11 yr 30% at 12 yr	harder for the age and the higher age.
X	Q.2	11% at 10 yr 30% at 12 yr	uniformly difficult
XI	Q.5	25% at 11 yr 25% at 12 yr	uniformly difficult
,,	Q.6	27% at 12 yr	difficult for higher age
XII	Q.1	43% at 12 yr	difficult for higher age
,,	Q.5	0%	harder for the age.

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3 Mursell, *Psychological Testing.*
4 Spearman, *The Abilities of Man.*
5 Wechsler Bellevue, *Adult Intelligence Test.*
6 Terman, *Measuring Intelligence.*

ABSTRACTS

Infantile Personalities—L. B. Hill (Amer. Jour. of Psychiatry, Vol. 109, No. 6, 1952).

Certain human beings who are not feebleminded, not grossly psychotic not psychoneurotic, yet who fail to mature in their general attitudes and manners or in their techniques and aspirations, are designated as infantile personalities. Their certain functions are more highly developed, but their attitudes and aims remain like those of an infant. When their desires are frustrated they become ill, express rage, speak in ambiguous and infantile language, have accidents or resort to alcohol or durgs. Many of them suffer from psychsomatic illnesses. They are capable in the manipulation of ' things,' but their disability shows up most strikingly in the inadequacy of manipulative efforts in interpersonal situations. There is a defect, probably primarily of interest and self-assertiveness showing a lack of differential perception of situations. Few details are recognised and more intricate patterns of details are not grasped. Those few things that appear to mean satisfaction and security, or their withdrawal, seem to impress them. They are not curious about what goes on in persons around them. This ignoring of meaningful phenomena results in a dearth of ideas as to what to do in a situation. They frequently have evidences indicating that they did not have good persons to emulate, that the mother was immature or that she was elderly or interested in some other profession than parenthood, or the child was brought up by senile grandparents or by bad nursemaids who were ignorant and disinterested. There is also a conspicuous absence of suitable playmates. Many of them grew up with no one but the family.

As for the treatment of these patients, they need an opportunity to function as such without criticism and within a situation in which their abilities are appreciated or given exercise. They need freedom from some self-assertion and expression but they must be restrained from activities that will lead to physical danger and frustration.

A. DATTA

Therapeutic Interviewing of Hostile Relatives—E. R. Inwood (Amer. Jour. of Psychiatry, Vol. 109, No. 6, 1952).

The author presents a report of his study of the various factors observed in the hostile reactions of the relatives visiting Walter Read Army Hospital. The hostile relative is one who reacts aggressively and with ambivalence, denying any mental illness on the part of the patient and, at the same time, placing the responsibility for such illness upon the hospital and military service. Such visiting relatives make various demands. They even make such demands as immediate discharge of the patient.

From the previous experience the author set up a technique for conducting interviews. The relative was encouraged to talk for a short period on any subject of his choice and was then questioned about the patient with particular emphasis being placed on the personal relationship between them. It usually became clear that the relative had hostile feeling toward the patient. In some instances the feeling was recognised but had been forcefully suppressed. In the case where the interviewing technique is not effective in decreasing hostility, a firm but polite stand is taken informing the relative that the patient is subject to military regulations and may be discharged at any time. The suggestion that the patient may be discharged immediately makes the relative aware of the area in which his difficulties actually exist—with the patient, not with the hospital. When the relative becomes aware of his hostile feeling about the patient, the hostility is dissipated. The relationship between the hospital and the relative is much improved and a better adjustment with the patient in the home after discharge becomes possible. The author suggests that this therapeutic interviewing should be considered a definite part of the patient's treatment programme whenever possible.

A. DATTA

Different Cultural Concepts of Past, Present and Future: A Study of Ego Extension—M. W. Smith (Psychiatry, Vol. 15, No. 4, 1952).

The author presents in this paper the cultural concepts of ego extension of (1) the Western European, (2) the Hindu Indian, (3) the Chinese and (4) the Coast Salish, a group of American Indian from the Pacific Coast regions of Canada and the northwestern United States.

The ego, in the Western European concepts, begins with the body at conception—or at birth and extends infinitely into the future.

The modern tendency to disregard concepts of heaven and hell as primary focal points of behaviour has curtailed the forward extension of the ego. The duration of the ego is shortened. Nevertheless the western ego still organises itself in terms of the future.

The ego in the Hindu philosophy on the otherhand extends infinitely into both past and future. The individual soul is viewed as undergoing continuous reincarnation. It may appear in any walk of human life or, indeed, in any form of life, human or non-human. Success in any present existence will lead to reincarnation in a higher form of life. The individual is identified with the world soul or Brahma in the very nature of which knowing and being are indistinguishable.

The ego in the Chinese thought is derived from one's parents and passes on into one's children. One's descendants not only guarantee one's future existence, but through the performance of the rituals, assure the continuity between past and future. The physical well-being of the family is thus inextricably associated with the continuing existence of the ego. The Chinese use the persent as the focal point from which existence flows evenly in both temporal directions.

Communist social philosophy which emphasises on the present as part of past and future is in close agreement with the Chinese concepts of temporal ego extension.

The Coast Salish, however, emphasises on the lateral extension. The ego owes a major part of its existence in the present to the relationship it can establish in the nonhuman world. Many of its attributes, skills and abilities come from supernaturals associated with animals or natural phenomena, or from supernaturals which are mere abstractions of human values. When power leaves death ensues. Ego existence is therefore absolutely tied to the power relationship.

The author concludes that it is the nature of man to conceive of himself not solely in terms of his own organism but in relation to a surrounding world.

A. DATTA

Concerning a Psychodynamic Function of Perplexity, Confusion, Suspicion and Related Mental States—H. F. Searles (Psychiatry, Vol. 15, No. 4, 1952).

The author discusses the psychodynamic function of the five mental states, *viz.*, perplexity, bafflement, uncertainty, confusion and suspicion. He points out that each of these mental states represents a largely intellectual defence, with a conscious affective tone, serving to keep under repression various affects of intolerable intensity. In this defensive process, such a mental state gives rise to an intolerably complex pressure of thought. There is an increasing intense need for simplification of the thought process. This need is satisfied finally by the emergence of the delusion. A delusion therefore represents an end result of the various mental states. Like a dream, it is a condensed expression of a vast number of unconscious determinants and like a conversion symptom, it is the expression of remarkably numerous and complex intrapsychic conflicts. But unlike a dream and a conversion symptom, it ensues in awareness a series of intolerable complexity of thought relief from which is desparately sought.

The author presents a theory of the mode of formation of the delusion: (1) at first the utilization of such defences as confusion, suspicion, etc., (2) then the consequent development of an increasing disturbance of thought, and (3) finally the emergence of the delusion as a means of releiving this pressure of thought. He believes that this theory of the formation of the delusion does not hold true in all cases. In acute psychosis, a delusional defence is immediately set up without there having been utilised any preliminary defences in the form of suspicion, confusion and so on, and hence without the patient's having experienced any such pressure of thought. But he finds support for this theory in the majority of chronic psychoses.

A. DATTA

Some Aspects of Jealousy and of Feeling Hurt—Mellita Schmideberg (The Psychoanalytic Review, Vol. 40, No. 1, 1953).

In this paper the author attempts to show that the two types of jealousy described in psychoanalytical literature—the pathological jealousy of adults and the normal (or exaggerated) jealousy in children—are nearly related to each other and the adults' pathological jealousy often reproduces directly the child's reactions.

The fear of losing the parents' love is an important element of child's jealousy. The more overwhelming the child's attachment to his parents, the more the underlying hostility and anxiety, the less can he stand up to the stress imposed by the new baby. The same pattern applies to the adult's jealousy. Oral, anal and genital factors may all contribute to the feelings of jealousy. The jealous lover wants to dominate and to have complete control over the loved object. This sadism and compulsion to control the 'loved' object is largely due to anxiety, which may arise from castration fears. Fear and hostility springing from the competitive attitude with women play an important role in jealousy, as indicated by the fact that men with hetero-sexual disturbances are specially prone to pathological jealousy. The competition with women accompanying homo-sexual attitude tends the jealous lover to isolate and subdue his woman—by so doing he robs her of her independence and 'castrates' her, rationalizing it as 'love.' In women, too, the castration complex plays a part in jealousy. By wanting to possess him entirely to herself, she castrates and subdues him.

Freud regards pathological jealousy as a defence against unconscious homo-sexuality. There are many ways in which the homo-sexual element may enter into pathological jealousy. The man often has fantasies of taking the woman's place and having intercourse with men. The pathological jealousy has not only the sadistic aspect, but the masochistic one also. The jealous lover tortures his wife, and also makes his own life miserable. Men with intense guilt over their masochistic passive attitude are particularly prone to jealousy, because they fear their own readniess to tolerate it.

Feeling of jealousy are nearly connected with the feeling of hurt or loneliness. Both, and the latter especially, contain at least elements of the former and merge into each other. Many neurotics and even 'normal' persons suffer from irrational or excessive feeling of hurt. This may be due to actual experience of physical hurts or fantasies concerning such. Women are more prone to feel hurt or misunderstood, largely because of their castration complex.

A. DATTA

Incest, Ingratitude and Insanity—John Donnelly (The Psychoanalytic Review, Vol. 40, No. 2, 1953).

The author presents in this paper aspects of psychopathology of King Lear. According to him, Lear's illness may be described as either

a delirium or an acute schizophrenic-like episode and not senile dementia as most of the writers have expressed. But as the episode is a matter of days, it certainly fits consistently with delirium rather than with schizophrenia. Lear is not insane at the beginning of the play as some critics have said, as each alleged proof of insanity can be gainsaid. The division of the kingdom is far from an unwise act and the 'choleric' temperament is an unusual type of personality rather than insanity.

In a healthy situation an individual as he grows, passes from a position of complete submission to independence in living his own life and the mature parent does not strive to maintain a hold on him. Yet there remain in the individual bonds of affection for the parent—the 'filial gratitude'—not because he ought to, but because he wishes to do so. Filial gratitude is demanded in less healthy parent-child relationships, particularly when the parent is abnormal in one or more emotional spheres. When the adolescent strives for independence, the emotional security of the parent is threatened and recriminations of 'ingratitude' commence. Lear is portrayed as such a parent. So insecure is he that he craves endless reassurance of affection of his daughters. He is thwarted when Cordelia, his favourite, makes her love sound like duty. He is not content with half the love of his daughter. It is total, and therefore incestuous, love that he wants from her. When he is re-united with Cordelia, his speech might well be made by a lover to his sweetheart.

Evidence of Lear's sexual phantasies is readily found in the scenes in which he is insane. In the incipient stage of the delirium he bids the gods seek out the sinners (of whom he is one). His preoccupation in that episode is mainly with the base ingratitude of his daughters. As the disturbance becomes more obvious the emphasis on ingratitude is accompanied by references in the sexual field, and these two subjects are finally linked in one passage. All his affection is centered on his daughters and this appears to be linked with a latent incestuous orientation. When he has been rejected by all three, his emotional stability is threatened. He endeavours to retain control, and being unable to cope with the later emotional and physical stress, he becomes insane.

A. DATTA

BOOK REVIEW

An Introduction to Parapsychology—collected papers on Psychical Research—B. L. Atreya, M.A., D.Litt., K.C., K.T., M.F.A., Professor of Philosophy and Head of the Department of Philosophy, Psychology, Indian Philosophy and Religion—Banares Hindu University. Kumar Publication, Banares, India: Pages 192, including bibliography. Price not stated.

This book contains eight chapters dealing with certain points of interest for psychologists, scientists in general, philosophers, theosophists and educated people with religious tendencies. It gives us an introductory knowledge of some unsolved phenomena revealed by psychical researches undertaken by the renowned scientists of the world. Here we become familiar with certain technical terms, such as, telepathy, telekinesis, clairvoyance, clair-audition, ectoplasm, meterialisation, levitation, precognition (or psychometry), retro-cognition, apparition, the aura and the astralbody, etc., and extra-sensory perception (E.S.P.) of specific individuals investigated by Dr. J. B. Rhine, Asst. Prof. of Psychology, Duke University, U.S.A.

In every scientific investigation the well-known principles of elimination and systematisation are involved and the chief motive of scientific study is " love and search for truth " as the author has put it.

I quote here some of the many views which have been expressed in the book. (1) " Psychology pursues the method and principles of the mechanical and physical sciences and in this pursuit it has lost its soul, its mind and its consciousness." (2) E.S.P. is " a purely spiritual fact, governed by their own laws unknown to us." (3) " the scientific explanation of Psychic phenomena has created an extra ordinary situation by introducing a body of well attested facts which will not cohere with the general body of existing knowledge."

Now the utmost that can be said at this stage of knowledge is that the standards of investigation of scientific phenomena on the one hand and of spiritual phenomena on the other, are probably different and hence it may not be possible to bring the second category of facts under the first one and spiritual phenomena may require other set of laws for their explanation.

Another principle of scientific study is that the theories formulated and the concepts framed must have as direct a bearing on the facts collected by systematised method as possible. When the explanatory concept has a remote bearing on the collected facts and the explanation seems to be far-fetched, involving too many unknown factors, then they are generally rejected as unscientific and vague and speculative hypothesis. Every scientist has in his consciousness certain aspect of philosophy with the help of which he tries to explain facts directly and clearly. Of course, he must keep an open mind and should be ready to recognise new facts and

also to accept new theories provided they can explain things in a better way and more directly. One aspect of science being teleological we try to understand and find out the specific influencing factor and investigate the ways of controlling it.

In view of what is mentioned in this book it is reasonable to suppose that all phenomena may be classified approximately under three categories, (*a*) the material or the concrete, (*b*) the spiritual and (*c*) the divine—The material facts are controlled by limited influencing factors, the spiritual facts are governed by innumerable factors difficult to decipher and control and lastly the divine facts are controlled by infinite number of influencing factors. The last named therefore appear to be mystic because they cannot be brought under control and experimented upon. Mathematical considerations also reveal the improbability of their being brought under control and hence the divine phenomena will never have the chance of losing the mystic aspect at any future period however remote.

The scientist will not leave the scientific standpoint and lose himself in a net-work of speculative arguments unless it can be definitely said that these arguments are decided improvements and help us to explain things in a better way and control the line of research in a better manner.

Laymen, however, are prone to be guided by their own totems and taboos, irrespective of what the scientists say. But in the meantime let the scientists try to remain without any bias and watch these meta-psychological phenomena so that they may take the opportunity of benefitting themselves by discoveries in this sphere.

M. GANGULY

OBITUARY

It is a matter of deep regret to us that we have to record in the pages of our Journal this year the death news of three valued and celebrated members of our Association.

Dr. Syamaprasad Mookerjee

Dr. Syamaprasad Mookerjee, M.A., D.Litt., Bar-at-Law., an Honorary member of our Association passed away untimely under tragic circumstances in the valley of Kashmere in the early morning of the 23rd June last. He was only 51 when he died.

Many are acquainted with his political activities but few realise the sincerity and the earnestness with which he attempted to raise the standards of our Education and to foster genuine spirit of Research amongst the students of Bengal.

It was during his Vice-Chancellorship that the Applied Psychology Section of the Calcutta University was started in the year 1938, as a section of the Department of Psychology founded by his illustrious father, late Sir Asutosh Mookerjee. He used to take active interest in the work of the Association and we felt proud indeed when he agreed to become an Honorary Life Member of our Association.

After a successful academic career, he rose by sheer dint of his powers and abilities to become the Vice-Chancellor of the Calcutta University at the age of 32 only. As an effective orator, as a beloved leader of the people, he earned a position for himself which few of his contemporaries can aspire to achieve.

In his death not only has Bengal lost an illustrious son but the whole of India mourns the loss of a patriotic soul full of fervour and enthusiasm and devoted to the cause of her material and cultural upliftment.

* * *

Dr. Girindrasekhar Bose

The sudden demise of Dr. Girindrasekhar Bose, D.Sc., M.B., F.N.I., the First Professor of Psychology of the Calcutta University is not only a loss to us, the psychologists of India but a loss to World Psychology also. He had a stroke in 1949 and after suffering from the effects of it for 4 years, he passed away on the 3rd June, 1953.

Dr. Bose was one of the Founders of the Indian Psychological Association and was a Life Member of it. He was the Founder President of the Indian Psycho-analytical Society and was twice elected President of the Section of Psychology and Educational Science, once in 1933 and the second time, when the Indian Science Congress was celebrating its Jubilee session in 1938. He was connected with the Department of Psychology of the Calcutta University since 1918. He made valuable original contributions not only to Psychology but to other fields as well. Some of his important contributions in the field of modern and Indian Psychology are the following: Concept of Repression, New theory of Mental Life, Everyday Psycho-analysis, Swapna, Purana Prabesh, Gita, Andhra Chronology, etc.

The opening of the Applied Psychology Section and Lumbini Park Mental Hospital are some of his achievements in the practical field of life. It was Dr. Bose who introduced Freud and Freudiasm in India. The Psycho-analytical method of treatment of mental disease as also its present development in India is solely due to him. His death has removed from the Indian Psychological World an erudite scholar and an outstanding leader. The Indian Psychological Association owed much to his valuable guidance and advice.

* * *

Professor Jamuna Prasad

We have to note with deep regret the death of Professor Jamuna Prasad, M.A., a senior member of Bihar Educational Service and a former member of the Board of Editors of the Indian Journal of Psychology. Professor Jamuna Prasad was the President of the Section of Psychology and Educational Science of the Indian Science Congress, 1952. He was a notable worker in the field of social psychology. His study of rumour with special reference to the spread of rumours during the Bihar earthquake of 1934 was highly appreciated by the psychologists here and abroad. He took an active part in the starting of the Department of Experimental Psychology at the Patna College. He had his post-graduate training in the Calcutta University and later studied at the Cambridge University.

* * *

IN MEMORIAM

J. Edwards

The students and staff of Psychology and Education Departments of the Ewing Christian College, Allahabad assembled in Tooker Hall on the 25th July, 1953 to mourn the sad passing away of Dr. Girindra Sekhar Bose who died on the 3rd June, 1953 at his Calcutta house after an illness of over four years. The condolence resolution was moved from the chair and passed by all standing in silence for two minutes. A brief statement was made regarding Dr. Bose and his work prior to passing of the condolence resolution, a summary of which is given below:—

Dr. Bose was born on January 30, 1887. After graduation he was appointed Lecturer in Physiology at the Calcutta Medical School. His D.Sc. thesis, Concept of Repression, though not much appreciated in India at first, drew unstinted praise from Dr. Sigmund Freud of Vienna, the leading psycho-analyst in Europe at the time. Later Dr. Bose was appointed Lecturer in Abnormal Psychology in the Department of Experimental Psychology, University College of Science, Calcutta, where he rose to be the Head of the Department of Experimental Psychology. In 1922 when the present writer was a student in the Department of Experimental Psychology, Dr. Bose lectured on the Theory of Opposite Wishes which turned out to be another of his original contribution to psycho-analysis. His masterly discussions on Hypnotism and Dream were greatly liked by the students. Dream analyses appeared regularly in *Prabasi*, a Bengali magazine. His *Puranpravesh* is a scholarly research in the Puranas. He interpreted the *Gita* in Bengali. He published *Andhra chronology* in the Journal of the Asiatic Society of Bengal. In the midst of many preoccupations he did not forget the children for whom his *Lalkalo* will always remain as a book of great interest. His *Everyday Psycho-Analysis* which the present writer reviewed in August, 1949, is, as far as is known, his last but by no means the least contribution to Psycho-Analysis. Whether dreams " are never innocent " (p. 97) must remain an open question. If " the growth of the sense of responsibility is a continuous process " (p. 263), the growth of intelligence must keep pace with it and not cease to grow as intelligence testers would have us believe that it does after the age of 14-16. Intelligence may not grow horizontally but it may certainly be growing vertically as Bagley thinks.

Dr. Bose had a striking similarity with Dr. Edward Lee Thorndike of Columbia University. Both taught statistics. Both believed that whatever existed, existed in some degree and therefore it could be measured. This gave a lie to Munsterberg's psychical fact being immeasurable. Both had the genius to see the essence of a problem and attacked it directly. The Doctorate Dissertation of both initiated a new departure in the domain of Psychology, Animal Intelligence of Thorndike and Concept of Repression of Bose. Both possessed a remarkable degree of openmindedness,

sympathetic understanding of the pupils and abounded in goodwill for all. Both were prolific writers. Apart from mental likeness, both of my teachers of statistics, Bose in 1923 and Thorndike in 1927, had a strange physical similarity. It appeared as though Nature had fashioned out of the same lump of clay a common physical type. When the history of Psychology is written in India Bose will occupy as pre-eminent a place in it as Thorndike does in American Psychology.

Dr. Bose was a Fellow of the Senate of the Calcutta University, Fellow of the Royal Asiatic Society of Bengal, and Fellow of the National Institute of Science in India. In 1938 he presided over the Psychological Section of the Indian Science Congress. He was elected Editor of the International Journal of Psycho-Analysis. He was the Founder of the Indian Psycho-Analytic Society and the Lumbini Park Mental Hospital.

In Dr. Bose's death, India loses a pioneer in the field of Psycho-analysis, a physician of repute and her greatest psycho-pathologist. Dr. Gardner Murphy who visited India recently on behalf of the United Nations Organisation as a psychological expert is reported to have advised someone wanting to know something about Psycho-Analysis to ' take the first train to Calcutta ' obviously to go to Dr. Bose and get a first-hand knowledge of the subject from India's foremost Psycho-analyst. Those who came in contact with Dr. Bose as his pupils or worked with him as colleagues feel his death as a personal loss. Dr. S. C. Mitra who worked with him for more than 30 years wrote recently: " When the history of the development of psychology in India is written, he (Dr. Bose) will undoubtedly occupy one of the most prominent places."

PRELIMINARY ANNOUNCEMENT OF FOURTEENTH INTERNATIONAL CONGRESS OF PSYCHOLOGY

The Fourteenth International Congress of Psychology will be held in Montreal, June 7 to 12, 1954. Meetings will be held both at the University of Montreal and McGill University. This will be the first Congress held under the direction of the International Union of Scientific Psychology, and it will be sponsored jointly by the Canadian Psychological Association and the American Psychological Association as hosts.

Membership in the Congress will be of three kinds. Qualified professional psychologists from all parts of the world may become *Full Members*. Ordinarily they will be members of their respective national organizations in countries where such professional groups exist, but other persons are invited to write to the Secretary of the Congress if they care to join. Such inquiry should state clearly the evidence that the applicant can participate in the Congress with profit. Students who are working for a graduate degree in psychology may enroll as *Student Members*. Wives and other members of the family of any *Full Member* may be enrolled as *Associate Members*.

All members will be privileged to attend the scientific meetings and general social functions of the Congress. It is planned to issue a volume of Proceedings which will be supplied without charge to all *Full Members* and *Student Members* of the Congress.

Membership fees for the Congress have been established as follows:

1. (*a*) Full members, residing in the United States and Canada . . . . . .$15.
   (*b*) Full members, residing outside of this area. . . . . .$5.
2. Student members. . . . . .$5.
3. Associate members. . . . . .$5.

The fees should not be sent until the applicant has been notified of his acceptance as a Member. They should be paid in Canadian or United States funds to the Treasurer, Dr. G. A. Ferguson, Department of Psychology, McGill University Montreal, P.Q., Canada. For members from sterling areas it may be possible to arrange payment in other funds.

The limited housing accommodations in Montreal make it imperative that an upper limit of 2500 be set for the membership of the Congress. While it is hoped that all qualified applicants can be accepted, the lists must be closed when this limit is reached. In general, priority will be given to applicants not resident in the United States and Canada. Following this, preference will be given to members of the Canadian Psychological Association and the American Psychological Association. Details of the administration of this plan will be announced later.

The program of the Congress is to consist of formal addresses by leading psychologists, of symposia, and of programs of invited papers

organized about a variety of topics of current interest. There will be no general solicitation of papers. On the other hand, the Program Committee for the Congress will welcome all suggestions as to topics appropriate for presentation or discussion, and the informal nomination of speakers. Such suggestions should be sent at any time to Professor Robert B. MacLeod. Cornell University, Ithaca, New York, U.S.A.

The Committee for the Congress is studying possible means of assisting psychologists at a distance to defray in particular the dollar costs of attending. Colleges and Universities are asked to bear in mind the presence in the United States and Canada of distinguished visitors from abroad, and to find places where these visitors may serve on summer school and conference faculties. It appears doubtful that any general subvention of the Congress can be obtained, but individual psychologists may be most helpful in calling to the attention of the Committee particular projects for which they believe support might be forthcoming. If the means are available, it is hoped that a stipend to defray expenses during actual attendance at the Congress can be offered to members coming from sterling areas who have no other source of dollar funds. Professor Roger Russell, University College, London, and Dr. Edwin B. Newman, Harvard University, Cambridge, Massachusetts will act as a clearing house for information concerning possible placements. Information about stipends will be available when final arrangements for membership are announced.

Preliminary inquiries concerning the Congress should be addressed to Father Noel Mailloux, University of Montreal, Montreal, P.Q. Canada.

ANNUAL REPORT, 1952

The Indian Psychological Association has completed its 28th year.

We deeply regret the untimely death of Mr. Pars Ram a member of our Association and the last President of the Section of Psychology and Educational Science of the Indian Science Congress.

The Association tenders its sincere felicitations to Dr. S. P. Ghosh, Jt. Secretary of our Association on his obtaining D.Phil. degree from the University of Calcutta and to Mrs. Uma Guha of the Anthropology Department, Government of India, a member of our Executive Committee on her obtaining the A.M. degree of the Cornell University, U.S.A.

We congratulate Dr. B. Kuppuswamy on his being appointed as Professor of Psychology, Mysore University.

Dr. N. S. N. Shastry, one of the oldest members of our Association has gone to Europe to visit different research centres in Social sciences. Mr. K. C. Mookerjee of the Inter-Provincial Mental Hospital, Ranchi, a member of our Association visited U.S.A. as a state guest.

We are very happy to announce that during the year 1952, we have been able to send 1950 and 1951 volumes of the Indian Journal of Psychology to all our members and subscribers. The 1952 volume is already in progress and we hope that this will reach our members and subscribers by the end of January, 1953. After making the Journal up-to-date, the 1953 volume will be published in parts.

We thank all the Life, Ordinary and Associate members of our Association and subscribers whose active sympathy and support have been a source of strength to us. We acknowledge our indebtedness to the National Institute of Sciences of India and the University of Calcutta for their contributions towards the publication of the Journal.

Many popular articles of the members are being published in the different periodicals, both inside and outside India. Popular lectures on different branches of Psychology dealing with actual educational, social and industrial problems and mental diseases were delivered by our members in different parts of the country.

The present strength of the Association as on the 31st December, 1952, is as follows :—

Hony. Members 2, Life Members 10, Ordinary Members 66, Associate Members 33, Subscribers (Inland) 20, Subscribers (foreign) 10.

Four new journals, namely Arquivos Brasiliros de Psicotecnica, Current list of Medical Literature, Samiksha, Sarawak Museum Journal, were added to our exchange list and we supply 7 copies of our Journals free of charges to different educational and scientific institutions, local and foreign.

The year 1953 is the last year of life of the present Executive Committee. There will be an election at the end of the current year. We request all our members to clear arrear subscriptions if any and actively participate in the election.

The total income of the Association under different heads for the year 1952 amounts to little over Rs. 1,000 and the expenditure is about Rs. 700. The detailed audited statement of accounts will be circulated later.

January 1, 1953

SUNIL CHANDRA BISI,
Secretary

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